VALUATION OF ICELANDAIR

Authors: Magnús Andri Pétursson - 96690
Magnús Freyr Erlingsson - 115634

Program: M.Sc. Finance and Investments
M.Sc. Finance and Strategic Management

Supervisor: Kasper Lund-Jensen

Master Thesis
Copenhagen Business School
September 16th 2019
Number of pages: 111

EXECUTIVE SUMMARY

Icelandair Group has played an instrumental role in recovering Iceland's economy after the financial crisis in 2008. After a boom which started in 2010, tourism has become Iceland's largest industry and a gateway out of the financial crisis. Despite this tourism boom, the market value of Icelandair has been highly volatile and subject to a severe downward trend in recent years. The purpose of this master thesis is to estimate the fair market value of Icelandair Group's share price as of September 1st 2019 through a discounted cash flow model which is based on a forecast derived from both strategic and financial analysis.

Icelandair is currently in a short-term lock-in situation where they are only able to operate Boeing aircrafts. The recent grounding of the Boeing 737 MAX aircraft has decelerated growth for the shorter term and hindered Icelandair from capitalizing on WOW air's recent bankruptcy. New aircrafts with increased flying range are threatening Icelandair's geographical advantage, which has been highly important in recent years. However, there are opportunities for Icelandair to utilize those new aircrafts by adding new and fast-growing market such as Asia to their hub and spoke network and connecting it to the European market.

From the financial analysis, we see how changes in jet fuel prices influence not only the operating performance of Icelandair but the industry in general. Icelandair is exposed to currency risks, and fluctuations in the ISK/USD exchange rate have an impact on its profitability. It is also clear that airlines which operate in North America are more profitable than airlines operating in Western Europe. Despite difficulties in 2017 and 2018, Icelandair is financially stable and less levered than their peers.

From the DCF model, we derive an implied share price of 9.75, which is a 33.5% premium to the market value of 7.30 as of September 1st 2019. The weighted average cost of capital is approximately 6% throughout both the forecasted and the terminal period. The estimated growth rate of the free cash flow in the terminal period is 1.5%. The vast majority of the enterprise value is based on cash flow which occurs in the terminal period. Therefore, the implied share price is highly sensitive to changes in both the WACC and the growth rate. There is a lot of uncertainty regarding both the Boeing MAX aircrafts and the possible entrance of a new low-cost carrier to the market. The DCF model in a way fails to capture and incorporate those additional risk factors as the required return on equity is solely based on the CAPM estimation.

Table of contents

List of abbreviations

ASK	Available seat kilometer
CAPEX	Capital expenditure
CAPM	Capital asset pricing model
CEO	Chief executive officer
DCF	Discounted cash flow
EBIT	Earnings before interest and tax
EBITDA	Earnings before interest, tax depreciation and amortization
EUR	Euro
EV	Enterprise value
FCFF	Free cash flow to the firm
FSNC	Full-service network carrier
FTE	Full-time equivalent
GDP	Gross domestic product
IATA	International Air Transport Association
IC	Invested capital
IFRS	International Financial Reporting Standards
ISK	Icelandic krona
LCC	Low-cost carrier
MAX	Boeing 737 MAX
NIBD	Net interest-bearing debt
NOPAT	Net operating profit after tax
NWC	Net working capital
PESTLE	Political, economic, sociocultural, technological, legal, environmental
ROE	Return on equity
ROIC	Return on Invested Capital
RPK	Revenue-passenger-kilometers
USD	United States Dollar
SWOT	Strengths, weaknesses, opportunities, threats
WACC	Weighted average cost of capital

1. Introduction

1.1 Introduction and Problem statement

Since the establishment of the first aviation company over one hundred years ago, the industry has been the subject of constant growth driven by both technological improvements and deregulations in the operating environment. Despite the constant growth rate, the profitability of the aviation industry has remained relatively low in comparison to other industries. History has shown that the profitability of the aviation industry is cyclical and highly correlated with external economic factors.

With a population of only 330.000 and a highly volatile economy, the financial crisis in 2008 hit Iceland hard with all three major banks going into bankruptcy. As a result of the crisis, the GDP per capita in Iceland declined in 2008 and 2009 by 18% and 27% respectively, and the unemployment rate increased significantly. What helped Iceland out of this economic downturn was the emergent of a tourism boom in 2010. During the financial crisis, the Icelandic krona had depreciated heavily compared to other major currency, making Iceland a relatively cheap destination for tourists. From 2010 to 2018 the number of foreign visitors to Iceland increased by 480%. Playing an instrumental part in this tourism increase was Icelandair, a publicly listed firm on the Icelandic stock exchange which has been in aviation operations since 1937. At the beginning of 2010, Icelandair´s market cap was 146 million USD. Only six years later, the market cap of Icelandair had increased to 1.564 million USD, which is an increase of 972%. During the same period, the S&P500 index increased by 86%. Despite the constant yearly double-digit growth rate of incoming tourists, the market cap of Icelandair decreased from its peak in mid-2016 until the end of year 2018 when the market cap had fallen to 396 million USD. That is a decrease of 75%. One of the main reasons for this drop was the entrance of WOW air to the market. WOW air was an Icelandic low-cost carrier established in late 2011. During the growth period of incoming tourism WOW air scaled up their operations and by the end of year 2018 it had surpassed Icelandair in number of passengers carried. The increased competition from WOW air lead to a significant loss of market share and increased price pressure. Due to unfavorable conditions in the external environment and bad decisions made by executives, WOW air filed for bankruptcy on the 29th of March 2019. At the same time, Icelandair had six Boeing MAX aircrafts which it had recently purchased grounded due to security reasons.

Both the bankruptcy of WOW air and the grounding of the Max aircrafts have led to severe changes and uncertainties in the operating environment affecting the market value of Icelandair. Therefore, we want to analyze Icelandair and the future outlook of both the company and the market it operates within, to estimate the fair market value of the company.

1.2 Research question

The objective of this thesis is to answer the research question:

- **What is the fair value of Icelandair as of the 1st of September 2019?**

To answer the research question, we will analyze Icelandair Group and the market and the evolution of the industry. We perform both strategic and financial analysis of Icelandair, do a forecast based on both the strategic and financial analysis, and finally perform a valuation based on a discounted cash flow model. Also, we perform a relative valuation based on multiples from similar and publicly traded firms.

To be able to answer the research question with a structured approach, we have prepared three sub-questions for each section. Those questions will be answered and explained thoroughly throughout this thesis.

Industry analysis

- How has the industry grown in the past, and what are the key drivers for growth?
- How profitable is the industry?
- How have the different business models of the industry evolved?

Icelandair Group and the market

- Which markets is Icelandair Group competing on?
- What are the different companies that makeup Icelandair group?
- How is the fleet composition of Icelandair?

Strategic analysis

- What macro-environment factors affect Icelandair's operations?
- How is Icelandair impacted by micro-economic factors?
- What are the SWOT factors that affect Icelandair´s current and future operation?

Financial analysis

- How has Icelandair's profitability developed over time?
- How is Icelandair performing compared to a chosen benchmark?
- What are the fundamental financial drivers for profitability?

Forecast

- What is the future free cash flow to the firm?
- Which value drivers will impact the future of Icelandair free cash flow?
- How sensitive is the cash flow to changes in the value drivers?

Valuation

- What is the weighted average cost of capital for Icelandair?
- What is the market value of equity, based on the discounted cash flow model?
- What is the relative value of Icelandair compared to similar and publicly traded firms?

1.3 Delimitations

The accuracy of any valuation can only be as good as the quality of the data it is based on. During the project, no contact has been made with Icelandair, and the valuation is solely based on publicly available information. Data was gathered through Icelandair's financial statements and reports. To maintain stability and accuracy throughout the project, financial data on the peer companies used in this valuation is all extracted through Bloomberg. Since some of the peer companies operate under a different calendar year, we do not analyze information from 2019 Q1 or Q2 statements but only the full fiscal years. Therefore the recent events of WOW air bankruptcy and the grounding of the MAX aircrafts will not be reflected in the financial analysis.

We assume that markets are efficient and that publicly available information reflects the true market value of equity and debt. To estimate the fair value of Icelandair's market capitalization, we apply the discounted cash flow method (DCF). The output of the DCF is highly dependent on the estimated weighted average cost of capital (WACC). When estimating the WACC, we apply the capital asset pricing model (CAPM). The CAPM is based on historical data rather than future estimates. In DCF analysis we make the assumption that the CAPM holds despite its limitations.

As briefly discussed in the problem statement, the operating performance and profitability of Icelandair is highly correlated with external factors, especially the price of jet fuel and the exchange rate of ISK/USD. Due to the limited time frame and the scope of this project, the expected future value of those factors are not analyzed in great details and are assumed to remain at the current level throughout the forecasted period.

All financial data for both Icelandair and the peer companies is extracted on September 1st 2019, and the valuation will reflect all publicly available information until that date. Hence, all information after that date is not taken into consideration in this valuation.

2. Structure and methodology

To answer the research question, we thoroughly analyze Icelandair's strategic positioning and its financial performance to generate a realistic forecast on the future operations and performance in which the valuation will be based on.

The main methodology applied in this project is the DCF method, which will be based on the forecast derived from the strategic and financial analysis. Our forecast is based on what we deem the most likely scenario. The enterprise value derived from the DCF is primarily based on the cash flows occurring in the terminal period. The value of the cash flow in the terminal period is highly dependent on both the estimated WACC and implied growth rate. To estimate the effect of those factors on the outcome of the DCF valuation, we apply a sensitivity analysis to evaluate how sensitive our valuation is to the two factors. Finally, we perform a relative valuation with multiples, where we compare Icelandair's trading multiples to a benchmark of similar and publicly traded companies.

The industry

The industry analysis section gives a broad overview of the key trends and value drivers giving rise to the growth in the industry over the last decades. It explains the profitability trends and how external factors influence the industry's profitability. Finally, a brief introduction is given on the two different business models generally operated and how changes in the regulatory framework have increased the competitiveness of the industry and influenced changes to the business models.

Icelandair Group and the market

The Icelandair Group and the market section provides a short overview of the history and composition of the company. Looking at the structure of the company gives a better understanding of the market in which the company operates. The different divisions of the company are presented along with a short overview of the operations within them. Finally, the section covers Icelandair´s current strategy and gives a brief overview of strategic decisions that have been made within the company in the past years.

Strategic analysis

The strategic analysis section is built up using three strategic analysis tools. First, PESTEL is used to analyze the external environment of the company and possible ways it can affect its operations. Porter´s five forces provide an overview of the attractiveness and likely profitability of the industry.

The SWOT analysis is used to sum up the internal and external factors that affect the company and give weight to the importance of each one.

The strategic analysis gives the project a deeper understanding of factors that cannot be measured in traditional financial analysis. Factors such as changes in the macro-environment, market development, and the competence of the company provide us with more detailed information to build our forecast.

Financial analysis

The financial analysis section assesses the quality of Icelandair's financial statements based on external auditor's review. To analyze the operating performance, both the income statement and balance sheet are reformulated. Operating items are separated from financial items to obtain the net operating profit after tax (NOPAT) and invested capital. Those operating items are used to calculate the ROIC, which gives the best indication of operating performance.

To evaluate Icelandair's operating performance, two peer groups are chosen. Peer group one consists of six companies operating in Western-Europe, and the second peer group consists of companies operating in North-America. Then the past five years historical EBITDA margin, EBIT margin, and ROIC of Icelandair is compared to the peer groups. Finally, we analyze the financing of operation, the long and short term liquidity risk of the companies.

Forecast

The forecast builds upon historical data and the facts that are presented in the strategic and financial analysis. The forecast presumes that the MAX aircrafts will begin to operate in early 2020 and Icelandair will be able to grow their route network in coming years. The forecast assumes that Icelandair Group will operate with the same subsidiaries except for the sale of Icelandair Hotels, which is presumed to be concluded in year-end 2022.

Valuation

In the valuation section, the rationale behind the discounted cash flow model (DCF) is explained. Detailed estimation of the components that make up the weighted average cost of capital (WACC) is conducted. First, we use the capital asset pricing model to estimate the required return on equity. For the risk-free rate, we use the ten-year yield on a US treasury bond, and as a proxy for the market portfolio we use the MSCI World index. The beta coefficient is the adjusted average beta of

the peer companies used for benchmarking. We then use a DCF model to discount the future free cash flow to the firm projected in our forecast. That gives us an estimation of Icelandair's enterprise value. Next, the net interest-bearing debt (NIBD) is deducted from the enterprise value to obtain the market value of equity.

Finally, relative valuation is performed where we use the peer groups trading multiple to estimate the fair price of both Icelandair's enterprise and equity value. We analyze the EV/EBITDA multiple, the EV/EBIT multiple, EV/Revenue, and Equity/Net income. Due to poor operating performance in previous years, the multiples do not necessarily give a good picture of Icelandair's relative value.

Conclusion

In the conclusion section, the key findings are summarized, and the answer to the research question is presented with suggestions for further research.

3. The Industry

Despite an almost constant growth rate, the airline industry remained only marginally profitable. Over the last 30-40 years, the airline industry has generated one of the lowest return on invested capital (ROIC) when all industries are taken into consideration (IATA, 2011). Increasing competition, rigorous regulatory framework, and strong influences from the external environment are some of the factors that can explain the low profitability.

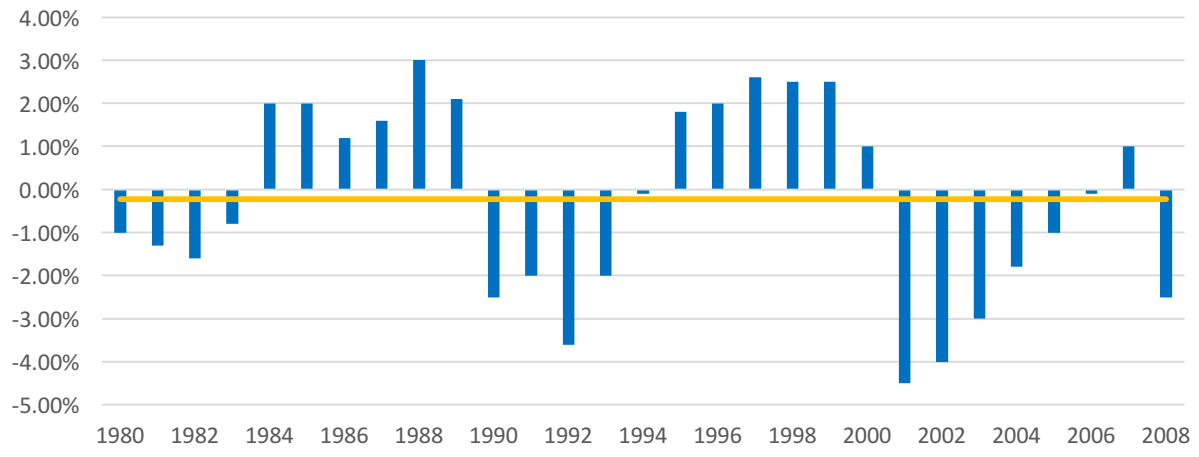
3.1 Growing but only marginally profitable industry

During the mid-20th century, when the airline industry was emerging, it was subject to very rapid growth in passenger traffic. In the 1970s, the world's average annual passenger growth rate was around 10%. Although it did not maintain this steep growth in the next decades, the industry grew 6% and 5.2% on average per year in the 1980s and 1990s respectively. The 9/11 terrorist attack in 2001 created a turmoil around the airline industry, and many stakeholders feared that it would never be the same again. The number of passengers decreased, and the industry's profitability took a hit (Doganis, 2010). However, by the end of 2004, the industry had recovered both in numbers of passenger and revenue vise. Up to the financial crisis in 2008, the average annual growth rate was around 7%. The aftermath of the financial crisis saw declining growth rates as was to be expected, 1.5% in 2008 and -0.4% in 2009. Again, the industry recovered quickly, and in 2010 the growth rate was back to 8.7%, and until 2018 there has been a steady growth averaging around 6.4%. (IATA, Statistics). Despite the growth, the industry has been profoundly affected by external conditions. Economic conditions and fluctuations in jet fuel prices, among other factors, explain cyclical profitability. As figure 3.1 shows, the average cycle lasts around eight years, and the deepest recession is around the millennial financial crises, the 9/11 attacks, and US invasion into Iraq in 2003 which lead to a swift increase in oil prices. The average annual profit margin of ICAO member airlines from 1980-2008 is -0.22% (Doganis, 2010).

Both technological improvements and deregulations have been a critical driver for quite fast and constant growth. New and more productive aircrafts, which can travel faster, and board higher numbers of passengers, have increased efficiency.

Figure 3.1

Annual profit margin of ICAO member airlines, 1980-2008



Source: Doganis, (2010), own creation

3.2 Technological changes

The past 50 years have seen a rapid increase in aircraft productivity. New and more productive aircrafts can go longer distances, on increased speed and board higher numbers of passengers. This has increased the industry's efficiency and had a significant impact on the cost of operations. One of the most interesting example of the technological breakthrough is the introduction of the Concorde aircraft in 1976. It could travel faster than the speed of sound, which is more than twice the speed of other planes. However, the Concorde was only able to carry 110 passengers, resulting in lower hourly productivity and higher cost per seat compared to its competitors. Despite being able to fly from London to New York in less than 3.5 hours, only two airlines, British Airways, and Air France operated the Concorde on commercial flights. Eventually, both airlines stopped operating the aircraft to cut their losses in the early 2000s (Doganis, 2010).

From the late 1970s until now, the main focus in the aircraft manufacturing industry shifted from long-haul to medium-haul aircrafts and the main focus has been on improving aircraft efficiency. The main innovations and improvements have been in adding more light materials in the aircraft's body, increasing the number of passengers it can carry and improved the efficiency of the jet engine. Another essential diver has been decreasing fuel consumption to reduce operating cost. The ability to carry more passengers, in less time and in a more efficient way has resulted in a steadily decreasing

cost per passenger. This has enabled airlines to offer lower ticket prices, which is one of the critical drivers for the growth in the industry.

3.3 Regulatory framework

The airline industry has been one of the most regulated industries in the world. The regulatory environment has affected the industry in many ways, especially when it comes to competition and profitability. From 1919 to 1949, a homogeneous global framework of international regulation was introduced as a response to both the economic and technological development within the industry. It consisted of bilateral air service agreements, inter-airline pooling agreements, and tariffs and pricing agreements. All agreements were negotiated through the International Air Transport Association (IATA), (Doganis, 2010). The three pillars enforced a highly regulated operating environment which prevented both change and innovation within the industry. This regulatory framework remained unchanged until 1979 when United States international aviation policy was gradually deregulated during the next two decades. During the 20 year period, the deregulations were also adapted by key European countries and later by the European Union. The period of deregulation peaked when the USA and the European Union reach the so-called "Open Skies" agreement in March 2007. The Open Skies agreement allows both any US and EU airline to fly to any destination within the EU and US respectively.

3.4 Two business models

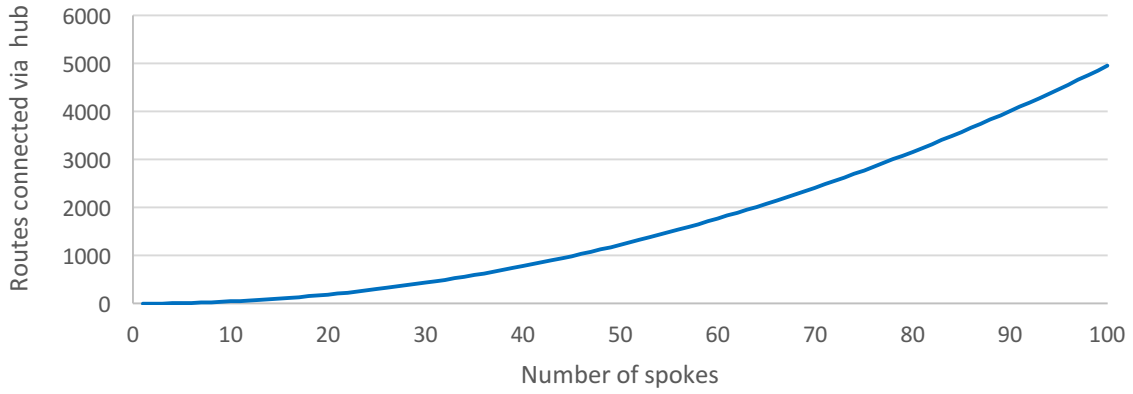
3.4.1 The Full-Service Network Carriers

Before the deregulation mentioned previously, airlines operated under the Full-Service Network Carrier (FSNC) business model. Those airlines often worked under government decided fare prices and routes. The FSCN business model focuses on a large fleet of different aircrafts to support a wide geographical network range. Most FSCN's operate both in the long haul and medium-haul destinations. The fare price includes a wide range of both pre-flight an onboard services and most FSNC's offer 2-4 service classes, from an economy class up to first class. The FSNC's operate under a hub-and-spoke network, where the network is centralized around a specific hub from which many routes (spokes) are operated (DLR, 2008). The concept requires the aircrafts to arrive at a similar time from different spokes and offload both baggage and passengers. Then it boards new passengers, often arriving at the hub from different spokes within the network. Operating from a hub makes it easy for

the FSNC to capitalize on interconnections. For example, 65% of connecting passengers at Heathrow airport in 2008 were British Airways to British Airways passengers (Doganis, 2010). As more spokes are added to the network, the traffic at the hub increases which enables FSNC airlines to operate larger aircrafts under greater economies of scale and lowering the cost per passenger. The number of routs connected through one hub is calculated as $\frac{n(n-1)}{2}$ where n is the number of spokes. Figure 3.2 shows how the number of connections increases exponentially as the number of spokes is increased. This multiplier effect explains why most of the world's larger aircrafts only operate under a hub-and-spoke network.

Figure 3.2

Number of routs connected via each hub

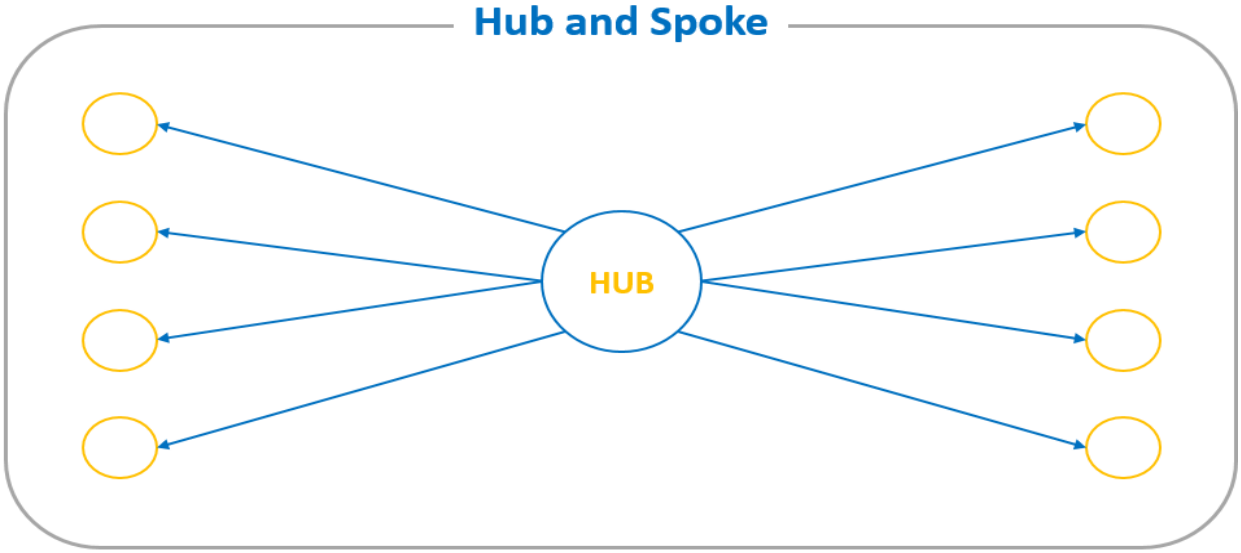


Source: Doganis, 2010, own creation

On the other hand, the complexity of the connecting all flights can be very high, and if an aircraft is grounded, it can have a substantial domino effect on the network. Before the open skies agreement hub-and-spoke was the only way for airlines to operate as most bilateral air service agreements singled out one or few airports as a landing point. Those bilateral agreements, to a large extent, still exist in Africa, Asia, the Middle East, and South America (DLR, 2008). Figure 3.3 explains the hub-and-spoke concept.

Figure 3.3

Hub and spoke network



Source: Doganis, 2010, own creation

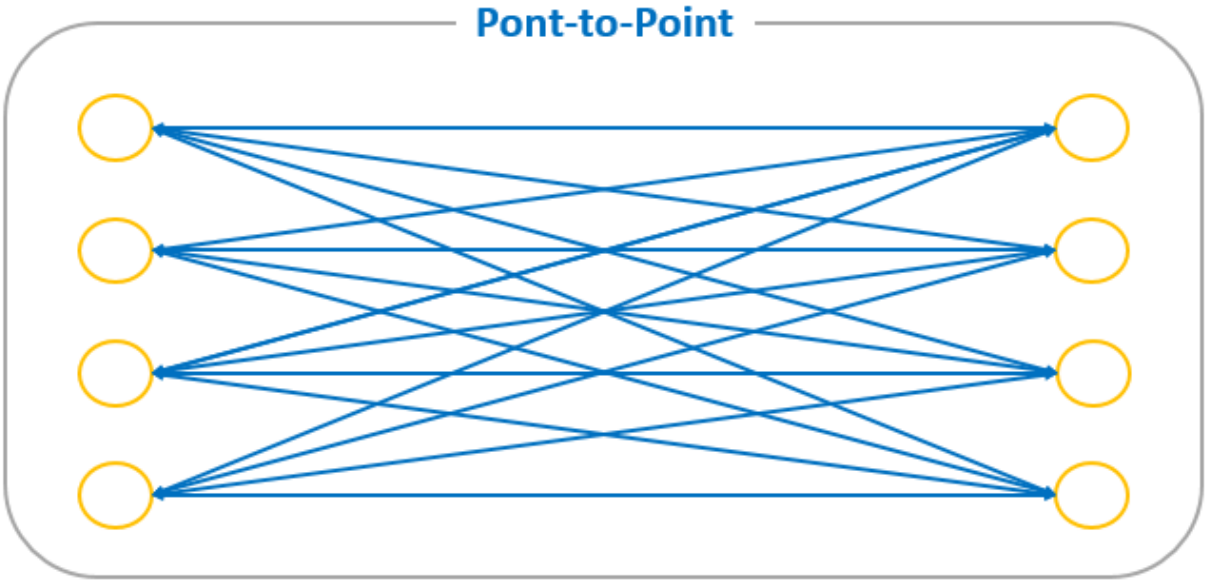
3.4.2 The Low-Cost Carriers

After the liberalization started in 1978, many airlines began to modify their business model and strategy. Under the new legislation, the operating environment was more flexible and allowed for more innovation and changes. What turned out to be the most prominent outcome of new and less restrictive regulatory framework where the Low-Cost Carriers (LCC). The new LCC business model focuses on point-to-point flights, cutting cost, and targeting more price-sensitive customers who are willing to trade off less service for a lower price (Azaduan and Vasigh, 2019). The LCC's operate rather new and homogenous aircrafts, generally medium-sized with the focus on cost reduction. A young and homogenous fleet is low in maintenance, the aircrafts burn less fuel and require less staff and overhead. By servicing only an economy class enables the aircraft to board more passengers with high-density seating. Free onboard service is held to a minimum, with no entertainment system or newspaper service. LCC's focus on point-to-point flights without connecting their routes with a centralized hub. They operate from smaller airports to reduce both cost and delays. Smaller airports generally charge less fees and are often willing to help with promotion of new routes. The LCC model focuses on maximizing the utility of their fleet by minimizing ground time and maximizing the time an aircraft is in operation or the block time. The revenue model is quite dynamic. Discounts are given on tickets that are booked long in advance, targeting customers that would not have bought tickets

otherwise. Prices increase as there is less time to departure, and more seats on the route are booked. Usually, tickets bought last minute are very expensive. Most LCC's offer additional service such as seat allocation, priority boarding and check-in baggage for an extra price. Those services are generally very expensive compared to the ticket price. Initially the LCC business models primary focus was on short-haul flights. Due to additional competition most LCC's have added medium-haul flights to their scheduled routes. LCC's have brought increased competition to the airline industry by offering different service standards at a lower price for consumers benefit (DLR, 2008). Also, due to the more modern fleet CO2 emission per passenger has decreased as the aircrafts both burn less fuel and are equipped with more dens seating than their FSNC competitors.

Figure 3.4

Point-to-Point network



Source: Doganis, 2010, own creation

3.4.3 Convergence to the Hybrid business model

In recent years there has been a convergence between the two business models. For LCC to be able to compete with FSNC on the business passenger segment, they have had to adjust their business model. Klophaus, Conrady, and Fichert show in their study that most LCC operate from the same airports as their FSNC competitors and employ some sort of hubing (Klophaus, Conrady and Fichert, 2012). The result is supported by Draft and Albers who in their empirical analysis of airline

business model convergence shows that the FSNC business model has remained more stable from 2004 up to 2012 than the LCC business model. They find that fewer airlines are operating under the point-to-point method. They also show that the FSNC business model has over the time adopted some of the LCC cost-saving structure, such as streamlining their fleet with more homogenous aircrafts. At the same time, the LCC's are adding new types of aircrafts to their fleet to be better able to compete on the medium-haul routes. Interestingly they also find that the difference between the FSNC's and LCC's average distances traveled per route has continuously decreased over the period. That supports that the LCC's are converging more towards the medium-haul routes.

4. Icelandair Group and the market

Icelandair Group is listed on the NASDAQ OMX stock exchange in Iceland. The company currently operates in several travel-related sectors within and outside Iceland. Most notably the group owns the airline Icelandair, which has served passengers as a hub between North-America and Europe for decades. Transport revenue accounted for about 72% of the group's total operating income in 2018. The primary focus of this thesis will be on the airline part of Icelandair Group.

4.1 Historical overview of Icelandair Group

The roots of Icelandair can be traced back to 1937 when a fledgling airline called Flugfélag Akureyrar was founded. That airline moved its headquarters to Reykjavík in 1943 and changed its name to Flugfélag Íslands. Soon after or in 1944, another Icelandic airline was founded by two Icelandic pilots, called Loftleiðir. In the first years of operations, the two airlines focused on domestic flights within Iceland. In 1945 Flugfélag Íslands completed its first international flights to Scotland and Denmark, Loftleiðir soon followed and began international flights in 1947.

The two airlines merged in 1973 under a new holding company called Flugleiðir. In 1979 Flugleiðir took over all operations of its two parent companies. It began using the name Icelandair as its international trade name while keeping the Flugleiðir name for the domestic flight market in Iceland. In 1987, Flugleiðir agreed with Boeing to renew the fleet of Icelandair which served international flights with a new route network. In 2003 Icelandair had upgraded to a single type fleet of Boeing 757 to serve its network.

In 2003, Flugleiðir became a holding company with 11 subsidiaries within the travel and tourism industry in Iceland, of which Icelandair was the largest subsidiary. In 2005 the name of the holding company was changed to FL Group, and the corporation was divided into groups, one of those was the Icelandair Group. After the financial crash in 2008, Icelandair Group began financial restructuring trough a mix of debt-to-equity conversions and extensions of loan maturities. The group divested non-core assets and issued new equity for 4 billion ISK. This restructuring was the base that the company is built on today.

4.2 Current ownership and corporate governance

The ownership of Icelandair has changed drastically after the restructuring in 2008. The majority of the shareholders are no longer private investors, like in the case of FL Group. This section will focus on the ownership structure and corporate governance as of 31.12.2018.

4.2.1 Current Ownership

As mentioned earlier, the company restructured after the financial crisis in 2008. The ownership structure changed as debtholders converted debt into equity. As of 6th of May of 2019, Icelandic pension funds were the major shareholders of the company and holing around 53% of the company´s equity. Other major shareholders are Stefnir, Kvika Bank, and Landsbréf through professional investing funds. Other shareholders held about 26.1% of the total shares (*Icelandair Group Prospectus*, 2019). In a shareholders meeting on 30th of November 2018, the shareholders agreed to increase the capital share of the company by up to 625.000.000 shares. On April 3 it was announced that PAR capital management (PAR), an American investment fund, had entered into a binding agreement to subscribe to all the new shares. The price of the newly issued shares was 9,03 per share for a total of 5.643.750.000 ISK and granted PAR an 11.59% share in the company. The total outstanding shares were 4.812.660.653 before the increase on 6th of May but were expected to rise to 5.437.660.414 after PAR´s investment. As of September 1st 2019 Icelandair Group´s market cap was approximately 315 million USD.

4.2.2 Corporate governance

The company's shareholders have appointed a board of directors consisting of five members. The board of directors was voted by the shareholders at the Annual General Meeting on 8th of March 2019. A detailed list of the current board of directors is in the Appendix.

4.3 Icelandair Group´s Companies

Icelandair Group is currently mainly made up of 9 different companies. These companies all operate within the travel industry, but in various market sectors. These companies are Icelandair, Air Iceland Connect, Icelandair Hotels, Icelandair Cargo, Iceland Travel, Loftleiðir Icelandic, Icelandair Ground Services, Fjárvakur, and Vita.

4.3.1 Icelandair

Icelandair is the single largest company that Icelandair Group owns and is their core business. Therefore, we will focus our analysis on Icelandair. An overview of the eight other companies is in the Appendix.

Icelandair is an international commercial airline based in Iceland. It has built an international route network with Iceland connecting 26 cities in Europe to 23 North-American cities during high season. Icelandair focuses its services on three different passenger markets. Firstly, the Icelandic domestic market, traveling from Iceland, the FROM market. Secondly, tourists with Iceland as a destination, the TO market. Thirdly, passengers traveling between North-America and Europe, the VIA market. Out of these three markets, the VIA market is the biggest and has driven the growth in Icelandair´s route network over the past years (Icelandair, n.d.).

In 2018, Icelandair's flight schedule was the largest in the company´s history and grew about 7% from the year before. In 2019 the route network was expected to grow about 10% from 2018. To support future growth, the company had put in an order for sixteen Boeing 737 MAX 8 (MAX 8) and 737 MAX 9 (MAX 9) aircrafts. The company received three of these aircrafts in 2018 expecting another six to be delivered in 2019. The company suffered a significant setback when these aircrafts were grounded in early 2019 after two airplanes had crashed within a short period, one in Indonesia and another in Ethiopia. To minimize the short-term impact, the company had to lease two Boeing 767´s and one 757-200, which the company initially expected to return in September 2019 (n.d.-e). The lease agreements are, however, likely to be renewed due to the prolonged grounding of the MAX planes. In addition to these planes, the company owns and operates 26 Boeing 757´s and four Boeing 767.

4.4 Icelandair Group´s core operations

Icelandair Group operates within several industries. The Group has revealed its strategic plan to shift its focus on its core competencies and divest non-core companies. The focus of this section will be on the group´s core operation.

4.4.1 Icelandair Group´s vision and strategy

Icelandair Group´s vision is "to unlock Iceland´s potential as a year-round destination, to strengthen Iceland´s position as a connecting hub and to maintain focus on flexibility and experience."

The group´s vision builds on sustainable value creation, which is supported by three operating pillars. The first pillar is exploiting the growth in Icelandic tourism from both existing and new markets. Icelandic tourism has grown fast over the period from 2012 to 2018 and has become one of the main driving forces behind the country's economy. The second pillar is network growth and refers to strengthening Iceland´s position as a hub between Europe and North-America by shortening connection time with increased operating efficiency. The third pillar is flexibility and experience. It refers to the ability to respond quickly to disruptive factors through a structure based on adaptability and nimbleness.

The group´s strategy is centralized in five key points, shown in figure 4.1.

Figure 4.1

Icelandair Group strategy

Source: Icelandair Annual Report, 2018, own creation

The Group was set to renew the vision, mission, and strategy statements in 2019. The new statements build on inputs from around 600 employees who took part in a strategic workshop in May of 2018 (Icelandair Annual Report, 2018).

4.4.2 Icelandair´s Group´s fleet

As of 31.12.18, Icelandair Group's fleet consisted of 51 airplanes. As mentioned before the group has throughout the past decades had a tight relationship with the manufacturer Boeing, and the group´s fleet reflects that relationship. Out of the 51-plane fleet, 46 were manufactured by Boeing.

In 2012 the company made an order for sixteen new MAX 8 and MAX 9 aircrafts. The order was for nine MAX 8 with a seating capacity of 160 passengers and seven MAX 9 which can accommodate 178 passengers. The company received three MAX 8 aircrafts in 2018, two of whom were financed by Joclo financing and one by a sale and leaseback. In 2019 the Group was expecting

to add another three MAX 8 and three MAX 9 aircrafts to its fleet. Those aircrafts, along with one with expected delivery in 2020, were financed by a sale and leaseback agreements. The financing for the rest of the order has not yet been completed.

To serve its international commercial route network, the group operates 24 Boeing 747-200´s which can accommodate 183 passengers, two 757-300´s which can accommodate 225 passengers and four 767-300´s which can fit 262 passengers aboard. Icelandair´s fleets average age is approximately 18.8 years. The 757´s have an average age of around 23 years and the 767´s 20.3 years (Airfleets, n.d.). The age of Icelandair Cargo´s, Lofteiðir´s, and Air Iceland Connect airplanes are unknown. The full list of the group´s numbers of aircrafts as of 31.12.18 is listed in table 4.1:

Table 4.1

Icelandair Group's fleet composition

Aircraft	Icelandair	Icelandair Cargo	Loftleiðir	Air Iceland Connect	Total	Owned	Lease	Ordered
Boeing 757-200	24	2	5		31	27	4	
Boeing 757-300	2				2	2		
Boeing 737 MAX 8	3				3	2	1	4
Boeing737 MAX 9								9
Boeing767-300	4		2		6	5	1	
Boeing 737-700			1		1		1	
Boeing 737-800			2		2		2	
Bombardier Q200				3	3	3		
Bombardier Q400				3	3	3		
Total	33	2	10	6	51	42	9	13

Source: Icelandair Annual Report, 2018, own creation

4.4.3 Boeing 737 MAX 8 and MAX 9

The development of the MAX 8 and MAX 9 has been under scrutiny after the two air crashes. The first plane to crash was Lion Air Flight 610 traveling from Jakarta to Pangkal Pinang in October 2018, where 189 people lost their lives. The second crash was Ethiopian Airlines Flight 302 traveling from Ethiopia to Kenya in March 2019, where 157 people lost their lives. Following the second crash, all MAX 8 and MAX 9 aircrafts were grounded.

The history of the MAX planes can be traced back to 2010 when Boeing´s most prominent competitor Airbus announced a more fuel-efficient version of its best-seller, the Airbus A320. This

put pressure on Boeing to respond with an upgrade of its own. Boeing´s answer was the redesigned 737 MAX planes, which featured engines that were similarly efficient as the new A320. In the following years, Boeing pushed both the design and building of the aircraft while persuading its customers that the new model would fly safely and pilots would not need to go through costly retraining (Glanz, Creswell, Kaplan, & Wichter, 2019).

To fit the new more fuel-efficient engines on the latest aircrafts, some changes had to be made on the aircraft. The engines were fitted closer to the body of the aircraft and moved slightly forward. The change of the position of the engines increased the likelihood of the plane pitching at too high and angle. To counter the high pitching Boeing installed the so-called Maneuvering Characteristics Augmentation System (MCAS). MCAS is a system that is designed to enhance the pitch stability of the MAX 8 and make it feel like flying other 737s. Failure of the MCAS system has been linked with both the Lion Air and Ethiopian air crashes (Boeing 737 Max: FAA says no fixed timetable for grounding to be lifted, 2019).

In May 2019, Icelandair announced that its long-term fleet strategy was under consideration. The review of the fleet plan should be completed before the end of the year 2019. Icelandair put forth three possibilities regarding the future of their fleet. The first possibility is maintaining the current strategy of the fleet and postponing the retirement of the Boeing 757 until after 2025. New Boeing 737 MAX aircrafts would be used to grow the fleet and slowly replace some of the 757´s. The second possibility is adding some Airbus A321neo long-range aircrafts to the fleet and operate them alongside the MAX fleet. The future fleet would, therefore, be made up of a mix of Boeing and Airbus airplanes. The third possibility they set forth is retiring all Boeing 757´s and MAX aircrafts and shifting entirely to Airbus. Icelandair notes that if they decide to add a new type of aircraft to its fleet, it will not start operating until 2021 the earliest. The reason is that adding a new type of aircraft would involve tasks such as training cabin crew and pilots, air mechanic training, and updating operating and maintenance procedures (Icelandair Group Prospectus, 2019).

A change in Icelandair´s fleet by adding an aircraft from Airbus would mean a considerable change for the company. It has throughout the decades remained loyal to Boeing, and all of its operations are designed for those types of aircrafts. The change would call for a significant investment in both infrastructure and training of employees.

4.4.4 Expansion plans

In early 2018, Björgólfur Jóhannsson announced that Icelandair was preparing to launch direct flights to India in 2019. Further, in the presentation of the 2018 Q1 results, the range of the large 767-300 airplanes was shown on a global map. The map lists Tokyo, Seoul, and Beijing as Asian destinations and Panama City and Recife as Middle/South American destinations within reach of Reykjavík using the 767-300 (Icelandair Group Presentation of Q1 2018 Results, n.d.). So far this year, Icelandair does not have any scheduled flight to India or any other Asian country.

Skúli Mogensen, the former CEO of WOW air, has after the bankruptcy, spoken out about the effects flights to Asia had on WOW air. The airline had back in 2017 made a deal to lease four Airbus A330-900neo wide-body aircrafts. In 2018 the airline started to operate flights to India, later the same year the company was in severe financial trouble. Skúli stated in December 2018 that the Asian expansion plans had been a mistake and had cost the airline a lot and that it had been a deviation from their core low-cost strategy (Halldórsson, n.d.). The airline filed for bankruptcy a few months later.

Icelandair has not only been looking at Asia to expand their network. The company acquired a majority share in Cabo Verde Airlines (CVA) in 2019. CVA has been operating flight to countries like the US, Brazil, and Senegal. Cape Verde is a small island in the central Atlantic Ocean and possesses similar geological traits as Iceland. The island is well situated for a hub and spoke model between Europe, South America, and Southern Africa. Icelandair views the investment as a potential opportunity to connect four continents in once place ("Icelandair Looks South and Buys 51% Of Cabo Verde Airlines," 2019).

5. Strategic Analysis

This section will cover the current operations of Icelandair from a strategic analysis perspective. The strategic evaluation is done in three parts. Firstly, a PESTLE-analysis is developed to evaluate Icelandair´s macro environment. Secondly, Porter´s five forces are utilized for assessing the micro-economic factors. Finally, a SWOT-analysis is used, to sum up the key factors from the internal and external factors that can affect Icelandair´s operation.

5.1 PESTEL-analysis

The PESTEL-analysis is used to evaluate the external factors that impact Icelandair and the market it operates in. It is used as a strategic analysis tool where Political, Economic, Sociocultural, Technological, Ecological, and Legal factors are inspected (Johnson, Whittington, & Scholes, 2017). Exploiting facts from the PESTEL analysis will provide this project with a deeper understanding of the external environment that can affect Icelandair in the future.

5.1.1 Political factors

Icelandair mainly operates flights to Europe and North America from Iceland and its sister companies also primarily operate within those markets. Regulations within the destinations Icelandair operates or even the nation their customer originates from can affect Icelandair´s operation.

The Single European Sky (SES) is a legislative framework that is designed to organize the use of airspace within the European Union (EU). The framework consists of four Regulations that aim to increase the overall performance of the air traffic management system (ATM) in Europe. The initiative organizes airspace into functional blocks according to traffic flow instead of using national borders. The scheme was designed to decrease the number of delays and mitigate aviation's environmental impact, as well as increase capacity and safety before 2020. In the past few years, the plan has, however, struggled to deliver on its targets. According to a member of the European Commission, the future of the scheme is calling for a digital transformation of the ATM system ("Single European Sky latest developments," 2019). An improvement in safety and digitalization of the ATM system would benefit all European airlines with a potential for cost reduction.

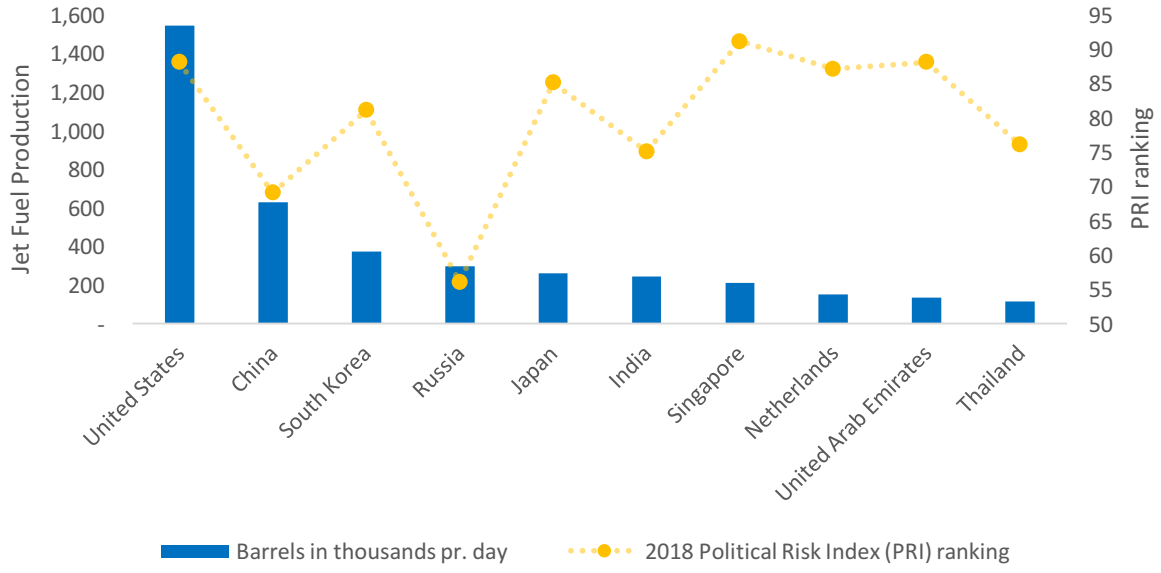
Political uncertainty in the United Kingdom following Brexit could affect the many airlines within Europe. The UK operates the largest aviation industry in Europe, and around 80% of all North Atlantic traffic passes through the UK and Irish controlled airspace. The UK might exit the EU

without a withdrawal agreement, which could complicate operations for many European Airlines. In the event of a no-deal, each country within the EU might have to negotiate separately with the UK regarding air traffic management, border management, security, etc. (IATA, n.d.-a).

Airlines rely heavily on jet fuel to keep their operation going. Figure 5.1 shows the world´s top ten jet fuel producers in 2014 and how each country ranks on the Political Risk Index (PRI). On the PRI, a lower score means higher political risk and vice versa. The index is calculated by using 17 risk factors such as turmoil, financial transfer, export markets, etc. China and Russia are among the four largest producers of jet fuel in the world and score the lowest on the PRI scale out of the ten countries. Political instability in these countries can impact the supply of jet fuel or other aviation-related products in some parts of the world.

Figure 5.1

Jet fuel production and political risk in 2014



Source: theglobaleconomy.com

Russia was the fourth-largest producer of jet fuel in 2014 and scored 56 on the PRI. The EU, US, Canada, and more countries have since 2014 held trade sanctions against Russia after the Ukraine crisis over Crimea. Import of certain products from Russia to the EU is forbidden. Russia has in response also set sanctions against the imports of certain goods from these countries. Among other things, the restrictions even prohibit EU nationals and companies from buying specific financial

instruments related to pre-defined Russian organizations. If these sanctions go on and become fiercer, it could affect the supply of not only jet fuel but other products that airlines use in their daily operation (Anonymous, 2016).

The US is by far the largest producer of jet fuel in the world, but China follows as the second-largest producer. The US scores 88 on the PRI scale while China scores 69. In 2017 the US launched an investigation into Chinese trade policies and later imposed tariffs on many Chinese products. The tariffs were of up to 25% on products ranging from handbags to railway equipment. Chinese authorities responded by imposing tariffs on products ranging from coals to medical equipment (BBC News, n.d.). This trade war between the US and China could result in tariffs on jet fuel or other products that are used by Icelandair or its suppliers, which could have adverse effects on their operations.

Both China and Russia are big in terms of raw material production which means that the rest of the world is highly dependent on goods from those countries ("Where do our raw materials come from?" 2016). Political decisions such as tariffs or price controls, technical requirements, and other regulations within these countries can have a negative effect on airlines and other industries around the world that rely on trade with these countries.

5.1.2 Economic Factors

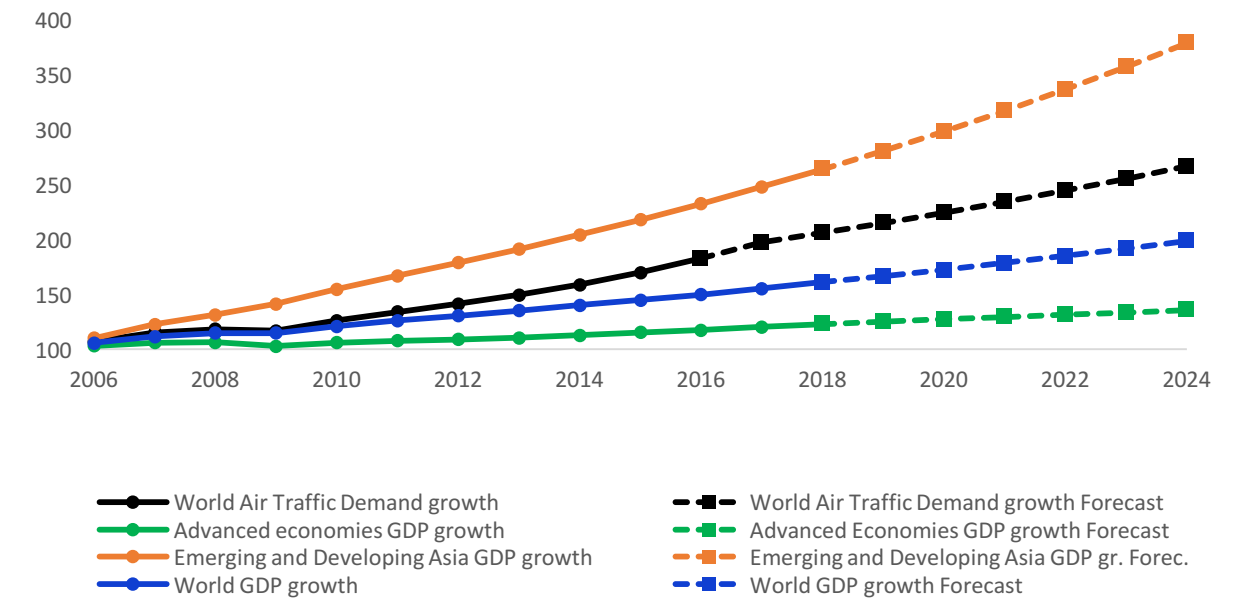
In a report from 2006, Boston Consulting Group (BCG) claims there is a relationship between GDP growth and demand for air travel. BCG showed that historical demand for air travel has grown at a rate of 1.5 to 2 times the GDP growth. BCG stress that the overall historical growth is not only explained by increasing GDP and that the higher demand comes from two distinct types of demand growth. The first one is underlying growth, which takes place naturally over time and is driven by external industry factors. The major driving forces in underlying growth are rising salaries, population, and trade increase as well as changes in tastes. BCG found a strong link between the number of long-haul flights and the level of income per capita. The second one is induced growth, which comes about because of decisions and actions that have been made by airlines over time. Induced growth comes about when airlines choose-to or not-to increase the capacity of the market further than the underlying demand growth. When increased capacity enters the market, airlines tend to lower the price of the extra seats to avoid flying with empty seat (2006).

According to Airbus, Gross Domestic Product (GDP) is an important variable when explaining the growth in aviation in the future. By looking at the expected GDP growth within each country, the future source of air traffic growth can be estimated. Airbus estimates that 51.2% of the World economic growth between 2017-2037 will come from countries in the Asia-Pacific, 16% from North-America, around 15.3% from Europe, 7.8% from Latin America and the rest from the Middle East, Africa and CIS. By looking at the data from another perspective, another key dynamic is revealed. Over the 20 years, emerging markets will be the driving force in World economic growth and account for around 61.5% while advanced economies will account for 33.2% and developing countries just 5.3%. The importance of the emerging markets is highlighted in the growth of private consumption, which is set to have grown 250% by 2037.

Figure 5.2 shows the GDP and air traffic demand growth over time (indexed at 100) and the forecast until 2024.

Figure 5.2

Annual real GDP and Air traffic demand growth



Source: International monetary fund

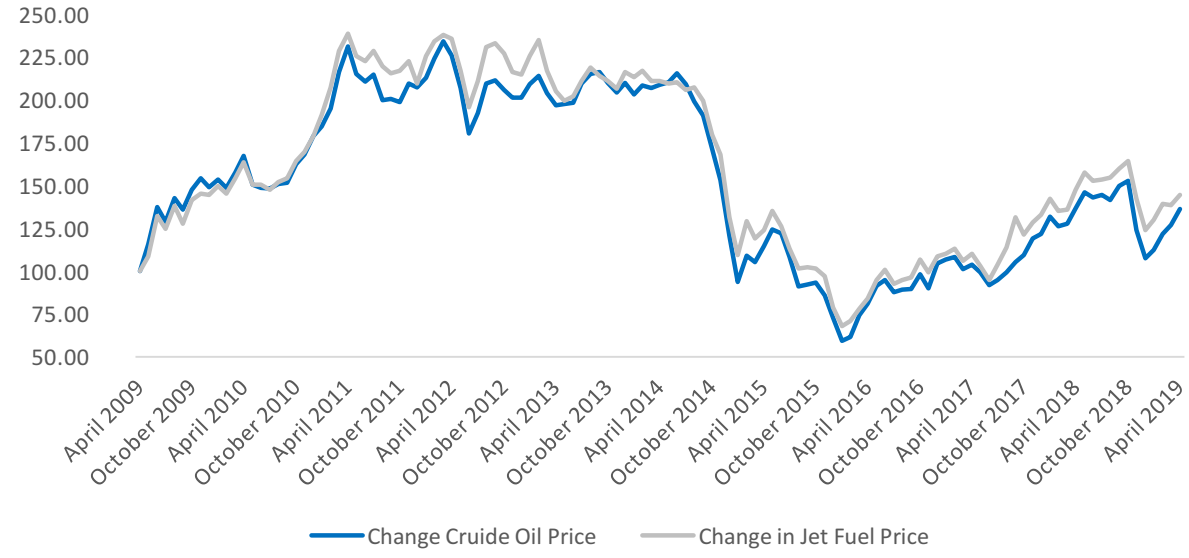
Combining historical and forecast data from the International Monetary Fund (IMF), Airbus and Statista it is clear how the emerging and developing Asian countries have outperformed, and will continue to outperform advanced economies and the world in annual real GDP growth. This supports

Airbus´s claim that Asia-Pacific countries will be the driving force of economic growth in the next two decades.

Airlines are profoundly affected by changes in jet fuel prices, and aircraft fuel amounted to 21% of Icelandair´s total operating expenses in 2018. Jet fuel prices are a highly volatile commodity and are highly correlated with the prices of crude oil, as can be seen in figure 5.3. Because airlines rely so heavily on jet fuel, they are exposed to a considerable risk which derives from the prices of jet fuel. To reduce the short-term risk that airlines face, they can hedge part of the risk by using derivatives. Icelandair Group follows pre-determined risk management guidelines which are created by the Board of Directors. The macroeconomic risk-related factors that the guidelines cover are foreign currency risk, fuel price risk, interest rate risk, and carbon price risk.

Figure 5.3

Change in Cruide oil and Jet fuel Prices April 2009 - April 2019 (Indexed at 100)



Source: Bloomberg

The fuel price risk of Icelandair is hedged at a ratio of 40%-60% 9-12 months forward, and additionally, 20% of the estimated exposure 13-18 months forward. The airline uses a mix of swaps and options and takes account of the forward ticket sales as the minimum cover if it exceeds the 40% lower band as well as other factors that can reduce the fuel risk. These factors include the possible benefits from the correlation between the USD and jet fuel, ticket pricing into the future and

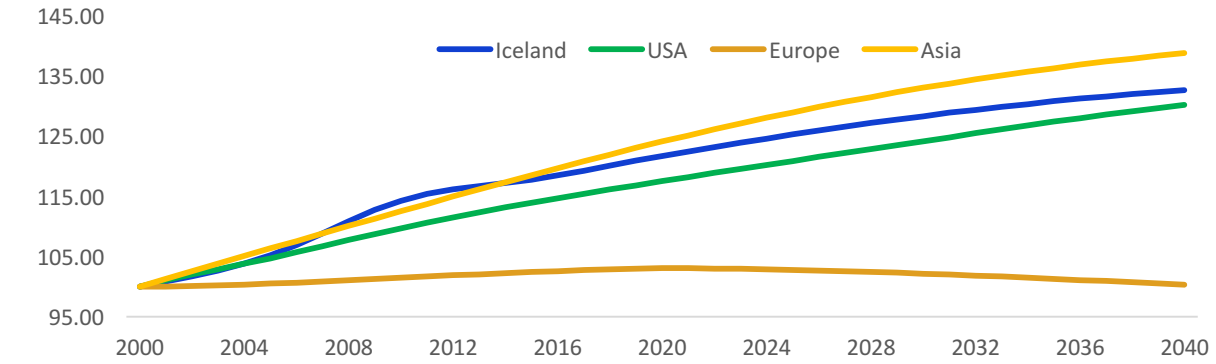
production management is a longer-term option (Icelandair Annual Report 2018, n.d.). Hedging the risk can be very costly, but it is clear that Icelandair does not want to take on the unnecessary risk.

5.1.3 Socio-Cultural Factors

The total population of the current and potential future markets that Icelandair operates in is plotted in figure 5.4. The figure shows the growth over the past two decades and the predictions over the next 20 years according to data on world population prospects from the UN. Iceland´s population is expected to grow 0.43% on average until 2040. The expected total population is set to change from 339.031 in 2019 to 371.746 in 2040. The total population in the US is expected to grow around 0.51% on average over the same period and reach a population of 366.572.154 in 2040. The total population of Europe is expected to decrease -0.13% per year on average until 2040 and consist of 727.810.571 people at the end of the prediction. Asia will be the leading force of the future population growth in the world, averaging 0.56% growth until 2040. The estimation presumes that Asia will consist of 5.2 billion people in 2040. It is evident that Asia is, and will continue to be in the future, the most populated part of the world. These predictions are based on medium-fertility variant prospects and can be profoundly affected by factors such as immigration laws, fertility, etc. The demand for air travel in these markets will continue to grow as the populations get bigger over time.

Figure 5.4

Estimated population growth in different markets (indexed at 100)



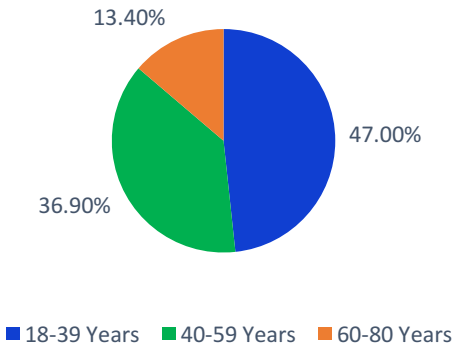
Source: The Icelandic tourist board

The portion of Icelander´s that traveled in 2014 are put forth in figure 5.5. The data is taken from a survey that was made by the Icelandic tourist board in January 2015. According to the study, the largest group is people from the age of 18 – 39, which accounts for 47% of Icelanders that traveled

in 2014. The study measured several demographic factors such as gender, age, residence, education, employment, income, and length of stay and referred to both domestic and international travels. Most of the Icelandic travelers lived in the capital, Reykjavik or near-Capital area and worked as managers or experts. From the survey participants, 67% took a foreign holiday in 2014 and traveled on average 2.4 times over the year.

Figure 5.5

Age groups of Icelandic travelers January 2015

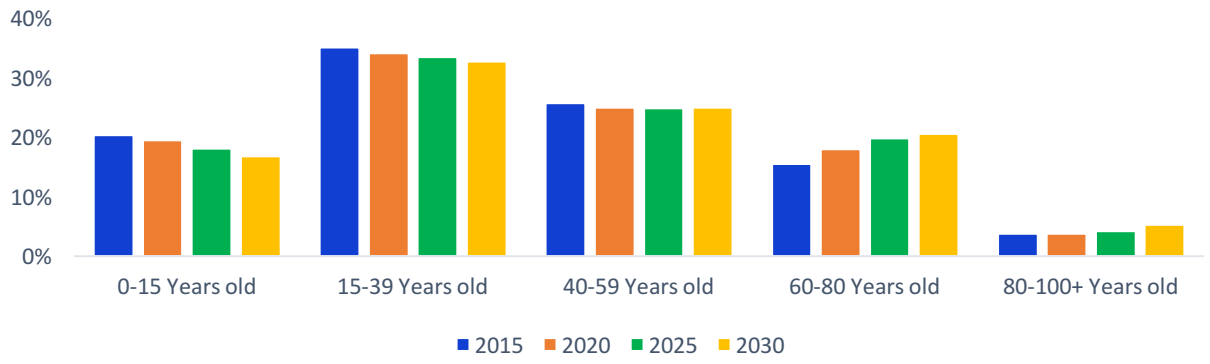


Source: The Icelandic tourist board

The survey suggests that as Icelandic people get older, they travel less. The age composition of future Icelandic generations should, therefore, concern Icelandair. If the average age of the country's population is getting older, it could mean that less Icelandic people will travel in the future. The estimated age composition of Icelandic people is shown in figure 5.6. The estimation is built on numbers from the UN, assuming medium-fertility just like in the population figure at the beginning of the section. According to the data, the average age of the Icelandic population will be getting higher in the next decade. The most significant change between the year 2015 and 2030 is in the age group 60-80 years old. If this trend continues, it could mean that the demand in the Icelandic FROM for air travel will not necessarily increase in correlation with population increase.

Figure 5.6

Icelandic population split 2015-2030

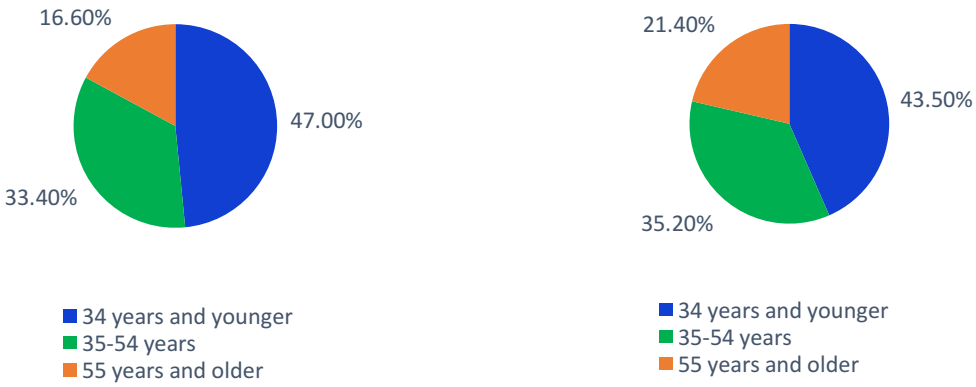


Source: The Icelandic tourist board

The Icelandic tourist board also conducted a similar demographic survey, as mentioned earlier on foreign travelers in Iceland. The age groups were split differently, from 34 years and younger, 35-54 years old and 55 years and older. Further, the survey was done over a more extended period or from October 2013 – August 2014, and the results were split into winter and summer. The age groups are very similarly split in the wintertime as in summer. However, young people seem to make up a more significant portion of total travelers in the summertime.

Figure 5.7 & 5.8

Age groups of foreign travelers in Iceland, Summer 2013 – 2014 and Age groups of foreign travelers in Iceland, Summer 2013 - 2014



Source: The Icelandic tourist board

The age development of other markets that Icelandair operates in can, just like the Icelandic market, have an impact on the future air travel demand. Only looking at the population growth of the markets could give biased estimations for future demand in these markets. A more thorough study into the future age developments within these markets could provide Icelandair with valuable insight on how the demand will be in the next decade.

5.1.4 Technological and environmental factors

Technology has shifted the way people travel over the past decades. E-Tickets, self-check-ins, and airline apps are just a few examples of how technology has allowed airlines to improve their service to customers while reducing operating costs at the same time. According to the IATA Global Passenger survey, the essential information that people want is flight status, baggage information and time for delivery and how much time they can expect to spend at security and/or border control. Applications are becoming the preferred option for people to receive notifications about their travel, while text message and Email are becoming less favorable. The booking experience is also important to passengers, and they prefer to be able to book additional products or services together with their flight tickets. About 53% of passengers want to be able to book hotels, and 40% want to book insurance at the same time (IATA, 2018a).

The technology behind airplanes is very advanced, and small improvements in factors such as fuel consumption can have a significant effect on the performance of airlines. The new generation of aircrafts from Boeing and Airbus are equipped with engines that can save up to 15% in fuel cost. For airlines like Icelandair, where 21% of the total operation cost is spent on fuel, such fuel reduction could reduce the operation cost around 3.15%.

The airline industry has increased its focus on climate change and CO2 emission levels. IATA has set forth three targets which they aim to reach through four pillars. The three goals are:

- An average improvement in fuel efficiency of 1.5% per year from 2009 to 2020.
- A cap on net aviation CO2 emissions from 2020 (carbon-neutral growth).
- A reduction in net aviation CO2 emissions of 50% by 2050, relative to 2005 levels.

To address the climate impact from the aviation industry and meet the pre-set targets, IATA has created a strategy from four pillars. The first pillar is utilizing new technology, including the use of alternative sustainable fuels. The second pillar is improving the efficiency of overall aircraft

operations. The third pillar addresses improvements in infrastructure, such as improved air traffic management systems. The fourth and final pillar is a single Global Market-Based Measure (GMBM) to bridge the remaining gap in emissions(IATA, 2018b). Since 2012, CO2 emissions have been a part of the EU Emissions Trading System (ETS). Under the system, all airlines that operate within Europe, are entailed to monitor, report and verify their emissions, and give up allowances against those emissions. If airlines exceed their allowance on emissions, they are required to buy excess allowanced from other airlines (n.d.-b). If airlines fail to cover their emissions with allowances, they can face high fines. The Environment Agency of Iceland fined the bankruptcy estate of WOW air around 3.8 billion ISK in July 2019 for not meeting the emission allowance for 2018. The fine was submitted according to ETS standards and stated that WOW air had not cleared up its emission allowance before 30th of April 2019.

5.1.5 Legal factors

Various legal factors can affect the Airline industry, some of them have been mentioned earlier in this chapter in different sections. Aviation is one of the most regulated industries in the world, and airlines must fulfill strict security and safety regulations to operate internationally. After 9/11, the regulations surrounding airlines were tightened. Both airlines and their customers had to adapt quickly to the changing environment. These regulations included factors such as (IATA, n.d.-b):

- Many countries mandated that airlines gave up information about their passengers before their arrival at the destination.
- Machine-readable passports were made mandatory for countries that were under the visa waiver program with the US.
- In 2006, passengers were forbidden to bring liquid containers bigger than 100ml through security.

Increased security increased operating costs for airports. The estimated cost of aviation security in the US rose from USD 2,2 Billion in 2002 to around USD 8 Billion in 2013(Gillen & Morrison, 2015).

European airlines can be made reliable for compensating passengers if they cancel or delay a flight for more than three hours, given it was not due to extraordinary circumstances. It can be extremely costly for airlines to compensate hundreds of passengers for cancelation or a delay. Due to

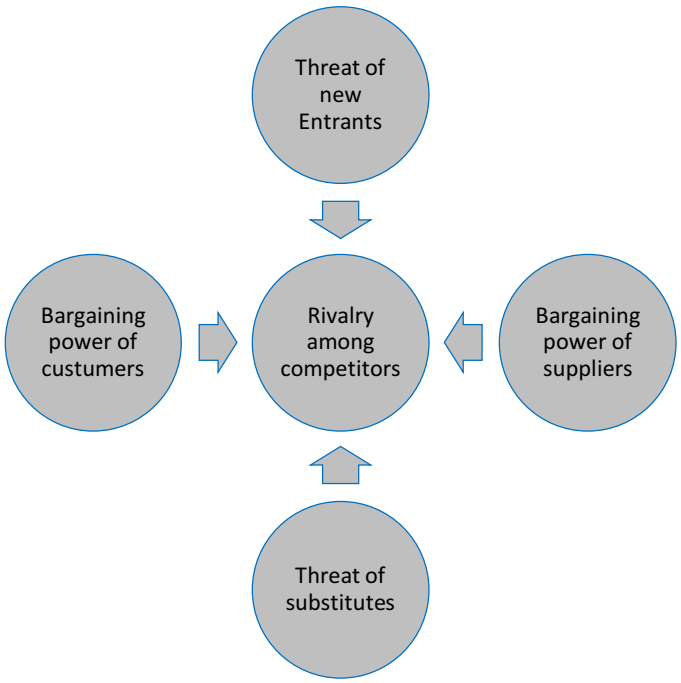
the groundings of the 737 Max, Icelandair had to cancel hundreds of flights over the past few months (Jarvis, 2019). It is unknown how much Icelandair has had to spend on customer compensation due to the groundings of the aircrafts. It is estimated that the total cost of the groundings, including the cost of renting new aircrafts, will be at least USD 50 million. Icelandair's CEO, Bogi Níls, has however expressed his view that he believes Boeing will compensate Icelandair for their losses due to the groundings (Ásgrímsson, n.d.). There is a legal uncertainty of if and how much Boeing will compensate airlines over the world that have suffered losses due to the groundings of the MAX planes.

5.2 Porters five forces

Michael Porter created the model of five forces to analyze the attractiveness and likely profitability of an industry. The forces he identified were a threat of new entrants, rivalry amongst existing competitors, the threat of substitutes, the bargaining power of suppliers, and the bargaining power of customers. Identifying these forces will give this thesis a deeper understanding of how Icelandair´s decisions are strategically affected by these forces.

Figure 5.9

Porter´s five forces



5.2.1 Threat of new entrants

The aviation industry has some significant barriers that hinder the entry of new entrants. The high capital requirements to enter the market can be extreme. Aircrafts, along with spare parts, slots at airports, landing rights, and other flight-related commodities can be very expensive. The average list price of the popular Airbus A320neo in 2018 was around $110,6 million, ("Airbus 2018 Price List Press Release," n.d.). Similarly, after the bankruptcy of the British airline Monarch in 2017, 22 landing slots at Gatwick-Airport were valued at 60 million pounds (Bjarnason, n.d.).

Airlines operating in Europe must possess an AOC license from a country within Europe. Icelandair operates under an Icelandic AOC license and must fulfill certain conditions set by the European Aviation Agency (EASA). The terms set by EASA are more detailed and thorough than the terms set by the International Civil Aviation Organization IACO (n.d.-g). Applying for an AOC license can be very time consuming because of how detailed and accurate the information in the application need to be.

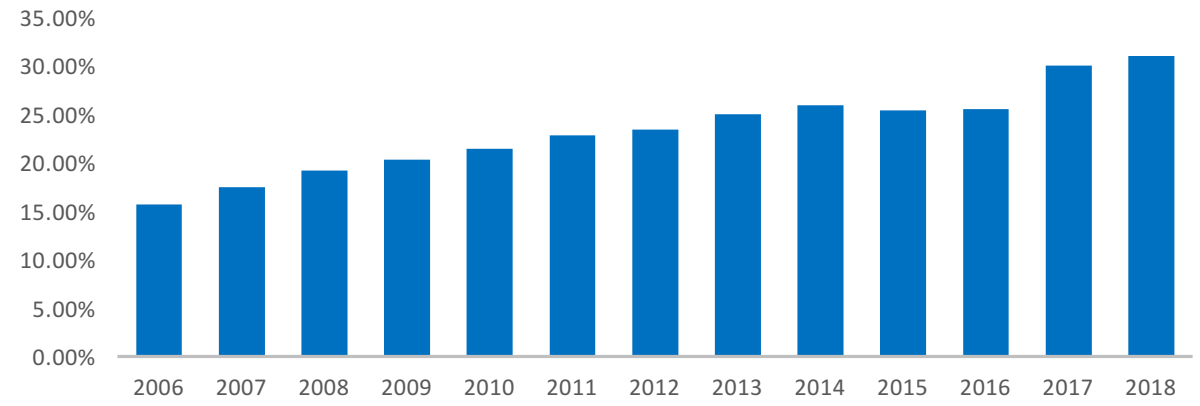
The landscape in the Icelandic aviation market has shifted over the past year. After years of harsh competition between two major airlines on the market, the low-cost carrier, WOW air went bankrupt in March 2019, and Icelandair became the only international commercial airline based in Iceland. News of the founding of a new airline came to light shortly after the bankruptcy of WOW air, when Skúli Mogensen, the former CEO of WOW air, declared his interest in building a new airline on the base of the old WOW air, which he called WOW 2.0 (n.d.-a). Other groups have also declared interest in founding a new airline.

A group which goes under the working title We Are Back (WAB) have formally applied for an Icelandic AOC from the Icelandic Transport Authority. The group is made up of a mix of former WOW air employees and professional investors. RÚV reports that 25% of the new airline will be owned by a holding company called Neo. The holding company will be held by former key employees at WOW air, lawyers, and other private investors. The rest of the company or 75% will be owned by Avianta Capital and Irish investment fund. Aislinn Whittley-Ryan, the daughter of one of Ryanair´s founders, is the owner of the Irish investment fund. (Elliot, n.d.).

Many factors affect the decisions of consumers when choosing an airline for traveling. Factors such as price, reliability, and brand loyalty all have an impact on the consumer choice of airline. The traditional tradeoff between price and quality has become the focal point of LCC. Figure 5.10 shows how the market share of LCC is has increased steadily since 2006(Mazareanu, n.d.).

Figure 5.10

Market Share of Low-cost carriers from 2007-2018



Source: Statista.com

The market for air travelers can be split into two categories, non-business customers who travel for leisure and those who travel for business-related purposes. Leisure travelers are often are more price-sensitive than those traveling for business. One reason is that leisure travelers must pay from their pocket while corporations pay for business travelers. Another fundamental difference between the two groups is how they perceive time. Leisure traveler does not necessarily value time as much as a business traveler. Business travelers look to minimize the time spent in transit because their time is valuable for the business they work for. There are many ways the business traveler can reduce travel time, e.g., fast track at security and check-in, private transport to/from the airport and choosing a punctual airline. Icelandair does not consider itself to be a low-cost airline and aims to compete by offering additional comfort and services for the price offered. The global market share has been moving towards the LCC in the past decade, and more and more travelers are choosing LCC as their preferred option when traveling.

In order to enter the air transportation market, some significant barriers need to be overcome. The requirements include a large amount of capital and detailed and time-consuming applications for an AOC license. The fierce competition with WOW air forced Icelandair into making decisions they might not have done if they were the only player in the market. These decisions have, among other factors, such as the grounding of the MAX planes, had a negative impact on Icelandair´s operation. The founding of a new Icelandic based airline seems to be evident within the foreseeable future. The

emergence of a new low-cost airline into the Icelandic market could have a significant impact on Icelandair´s position in the Icelandic market.

5.2.2 Threat of substitutes

In many markets, traveling on a commercial flight is only one option out of many to get from one location to another. Self-Driving, trains, buses, and ships are often less expensive alternatives to flying. In some markets, it is not always that simple, examples of such markets are the Icelandic to and from markets.

Iceland has for a long time gained from its unique geographical location between Europe and America. During World War II British and American soldiers occupied the island, because of its geographical position, and invested heavily in the infrastructure and built airports and roads. The rich fisheries surrounding the island have also had a positive effect on the economic development of the country. The geographical position is not only favorable, but Iceland is also not connected to any other country which limits the traveling to and from the country to air and sea. Only one passenger ship regularly sails between Iceland and Europe. The company that operates the ship is called Smyril line, and it sails between Hirtshals in Denmark, Faroe Islands and Seyðisfjörður in Iceland. Seyðisfjörður is on the other side of the island from Reykjavík, and the distance between the two is about 650 Kilometers, which takes around 8 hours to drive. The travel time from Iceland to Denmark with Smyril line is approximately 2,5 days, and the basic rate was about 2060 DKK per adult over the low season in 2019 ("Smyril Line—Án farartækis," n.d.). Traveling by air is for most people the only option when traveling abroad. Sailing over the sea takes considerably more time, and the cost associated are not competitive enough. As of today, we do not see any alternative travel method that could replace air travel to and from Iceland.

The business class segment of the airline industry is changing as the quality of digital communication increases. Meetings are increasingly held over video calls, where many people from different parts of the world can participate in a meeting from wherever they are working. Flying to a meeting that can be held over a video call is a cost that any business would want to eliminate. The business segment of Icelandair´s operation could suffer from fewer passenger traveling to and from meetings overseas.

The via market has been the driving force in Icelandair's growth over the past decade. In 2010 around 38% of Icelandair's passengers came from the via market. In 2018 they amounted 51% of the total passengers (Icelandair, 2018). Like mentioned earlier, Iceland has a unique geographical location between America and Europe and is well situated as a connecting hub between the two continents. The reason has been that smaller passenger aircrafts like the A320 neo can only cover around 6300 km (Airbus, n.d.-a). E.g., the distance from Texas to Copenhagen is about 8400 km, but from Texas to Reykjavík is about 6500 km. For such a route it would currently be ideal to use a connecting hub between the two locations. Soon this might change as new aircrafts such as the A321 XLR are set to enter the market. They could threaten Iceland´s position as a connecting hub between the two continents. The new aircraft, which is set for service entry in 2023, is expected to have the capacity of 180-220 seats and offer a range of up to 8700 km. The entry of such aircrafts could mean that Icelandair´s via market will suffer significantly as other airlines are likely to be able to offer straight flights on long routes for lower prices than before (Airbus, n.d.-b).

Icelandair is currently in a good position as the only Icelandic airline. There are currently no foreseeable competitive alternatives to air travel for people traveling to and from Iceland. However, threats to the via market, which has been the driving force for the growth of their route network over the past ten years, should be considered seriously. As Iceland is losing some of the benefits from its geological location.

5.2.3 Power of suppliers

According to Porter, the bargaining power of suppliers is regarded as high if there are few suppliers, the supplier is independent on the industry, there are no substituting products, and the cost of substitute products is high. Commercial airlines around the world are, due to scarcity, forced to do business with limited numbers of aircraft manufacturers. Only two major manufacturers are currently operating in the world, Airbus and Boeing (Boyd, n.d.). Icelandair has throughout its history only operated Boeing aircrafts on its international routes. The cost of switching to Airbus airplanes could be very high in the beginning, training employees and acquiring knowledge of new types of aircrafts is likely to be very expensive and time-consuming. The power of airline suppliers is therefore significant on airlines that only operate airplanes from one of the two major manufacturers. Icelandair is not a big airline on the international scale, only a few major airlines in the industry are likely to be able to affect the prices that Boeing and Airbus offer on their aircrafts.

Other suppliers of Icelandair include sellers of jet fuel. Airlines are highly dependent on jet fuel as it is a core product for their operation. Airlines are unable to affect the price of jet fuel, but they can minimize the threat that price changes pose to their operations by hedging the risk. As discussed in section 2.1.2, Icelandair attempts to affect the price which they pay for jet fuel by hedging the price forward. Hedging the cost can be expensive, and Icelandair can end up hedging at a price that is higher than the current market price of jet fuel, which could have a negative impact on its operations.

Labor unions were created to increase the bargaining power of employees against their employers and fight for better wages, reasonable hours, and safer working environments (n.d.-d). For Icelandair, payroll and personnel expenses made up around 36% of the total operating expenses. A national salary increase of 3-5%, among other factors, had a negative impact on salary costs, which increased by 15% in 2018 from 2017(Icelandair, 2018). One of the driving forces in the salary increase is the power of labor unions.

An example of how labor unions have affected Icelandair's operations is the strike of flight mechanics in 2017, where among other factors, they demanded higher salaries. During the strike, which lasted 46 hours, Icelandair had to cancel about half of its flights which affected about 20.000 passengers (Ísleifsson, n.d.). The exact costs associated with the strike is unknown. Aircraft mechanics, pilots, and crew are all required for airlines to operate on a daily bases. If any of the unions of these professions were to go on a long term strike, it could result in an operation stop of Icelandair.

5.2.4 Power of consumers

The bargaining power of consumers refers to which extent consumers can influence the price of goods or services within a specific industry. The bargaining power is especially strong when consumers have negotiating leverage on companies in the industry and can play competitors against each other (Micheael E Porter, 1991).

In the airline industry, it is effortless for consumers to change from one airline to another. Booking flights online has made the choice much more accessible and transparent for consumers. The elasticity of air travel varies between location and coverage of the market. Price is, however, becoming the most critical factor for consumers when choosing which airline, they will fly with. The change is led by the boom in low-cost travel and the transparency of the internet (Smyth & Pearce, n.d.). Sites

like Dohop.com offer search engines that can give results from multiple airlines and an instant price that each airline offers. Such sites make a comparison on price between airlines on different air routes very easy for the consumer. Some airlines provide a so-called frequent flyer program, which rewards people who regularly fly with the same airline. This can create some switching costs for a particular part of the market, but overall the switching cost between airlines is minimal.

Industries, where consumers with high bargaining power exist, are often characterized by a few large consumers. When a company relies heavily on a limited number of consumers, it can increase the bargaining power of the consumer. The airline industry is not characterized by a few large consumers, quite the opposite it is made up of a high number of small consumers. One exception is large companies that buy a high number of seats each year from a particular airline.

Overall, the consumer in the airline industry has a substantial bargaining power towards airlines through low switching costs and the help from powerful search engines. The bargaining power forces airlines to compete harder in ticket pricing, which can result in a lower revenue stream for the airlines.

5.2.5 Rivalry among competitors

Rivalry among existing competitors can emerge through price wars, marketing wars, an increase in customer services, and other similar situations. Like mentioned earlier, the impact of LCC has decreased the price of air travel over the past decade. Price wars can shake up industries but are likely to deprive the profits as the price gets lower (Michael E. Porter, 2008). The former LCC, WOW air pushed down the price to and from Iceland. After years of harsh competition, Icelandair was able to raise its prices again after the bankruptcy of WOW air (Olgeirsson, n.d.).

As mentioned in section 2.1.2, it is expected that air traffic demand will continue to rise in the next decade. The growth of the air travel market is likely to spark even more competition between airlines, through both pricing and brandings going forward. Even though Icelandair is no longer competing with WOW air, there are still 15 airlines that fly to Iceland in the wintertime and 25 over summer. The low switching costs between airlines and fierce price competition mean that rivalry amongst competitors is very intense in the industry.

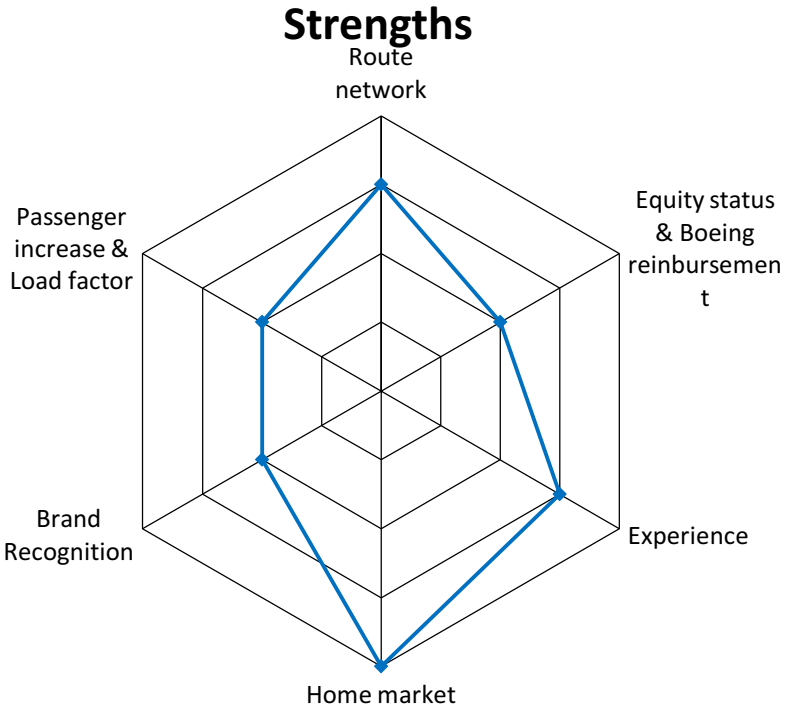
5.3 SWOT Analysis

In the SWOT analysis, core aspects from the internal and external strategic analysis are summed up to uncover Icelandair´s strengths, weaknesses, opportunities, and threats. The strengths and weaknesses are based on internal factors, and the opportunities and threats are based on external industry factors. Each section begins with a radar graph where different factors are weighted based on the authors' judgment. The factors are then discussed in greater detail below the figures.

5.3.1 Strengths

Figure 5.11

Strengths



Based on authors judgment

Icelandair is an experienced company that can trace its operations back to 1937. The brand is one of the most recognized in Iceland as it is one of the oldest Icelandic companies. The company did return a healthy profit to its shareholders when external factors were favorable. Icelandair has a strong route network base. The company has had to make changes to the network due to the grounding of the MAX planes. Icelandair has become the most dominant airline in the Icelandic

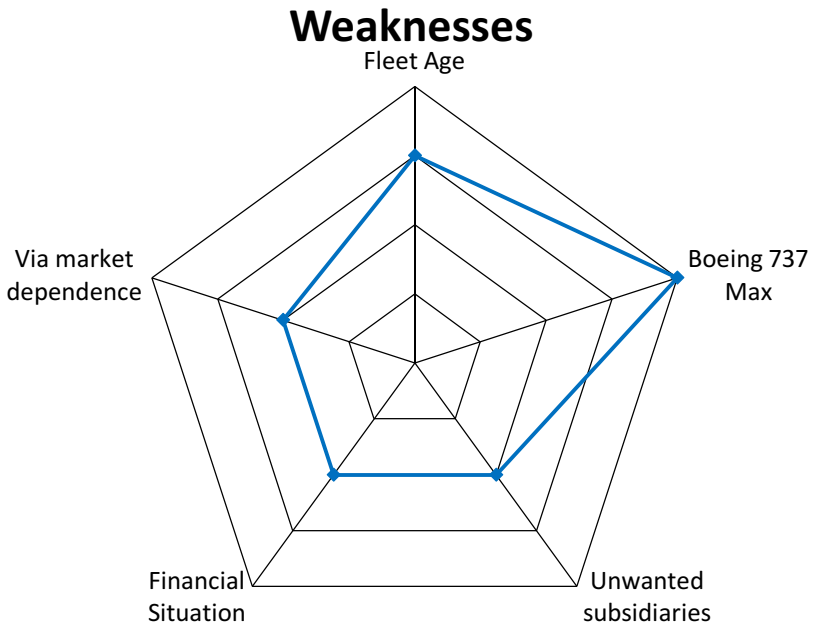
aviation market after the disappearance of WOW air. Being the only Icelandic based airline has given the company a boost in recent months. Even though the first half of 2019 did not return a profit, the numbers of passengers and the load factors were both up.

Icelandair has a healthy equity ratio and has recently attracted a capital injection from foreign investors, which has helped the company in these tough times. The total reimbursement from Boeing is still not clear, Icelandair estimates that the overall negative effect on EBIT to be at least 50 million USD (Icelandair, 2019). A reasonable reimbursement from Boeing could potentially offset a part of the recent negative financial outcomes of the company.

5.3.2 Weaknesses

Figure 5.12

Weaknesses



Based on authors judgment

The current age of the fleet calls for renewal in the coming years, which can be costly for the company. Although Icelandair has been renewing a part of its fleet with new Boeing MAX 8 and MAX 9 aircrafts, their fleet is still old compared to other airlines within Europe. As mentioned earlier, the company's fleet strategy is under review where three scenarios are considered. The decision to order

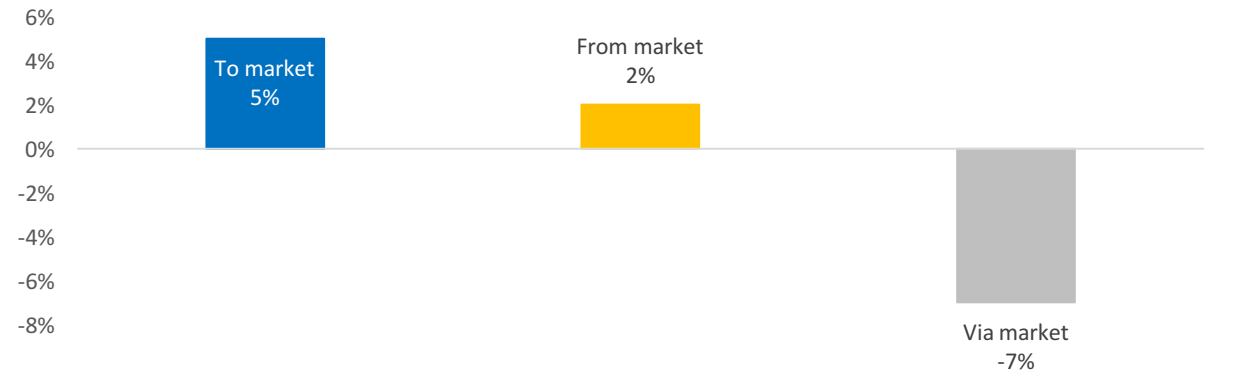
the new Boeing aircrafts has had a slightly negative impact on the company´s image and hurt it financially. Icelandair has had to cancel flights, lease aircrafts and has not been able to save as much on fuel costs because the older planes burn up to 20% more fuel than the MAX.

The company is in the process of divesting its unwanted subsidiaries. The company has signed a sales agreement for the hotel part, and it states that Icelandair will hold at least 25% for the next three years. The tourism part is in early sales stage and is expected to finish in late 2019. The tourism segment of Icelandair reported a loss of 8.9 million USD in the first half of 2019. It can be expected, based on previous years, that in the second half of 2019 they will recover some of that loss. The loss could affect the price Icelandair can get for the tourism subsidiary.

Icelandair still has a healthy equity ratio, but the financial situation of the company has taken a big chunk out of the equity. The equity ratio at year-end 2018 was 32% but deteriorated to 25% in mid-2019. There is no guarantee that the loss due to the grounding of the MAX planes will be reimbursed in full. The company relies heavily on the VIA market, which amounted to 51% of the passenger mix in 2018. The forecasted passenger mix is set to expected to change from 2018 – 2019. The TO and FROM markets are expected to increase its part of the total passenger mix in 2019 while the Via market decreases. If this trend continues, it will balance the passenger mix and reduce the reliance on the Via market.

Figure 5.13

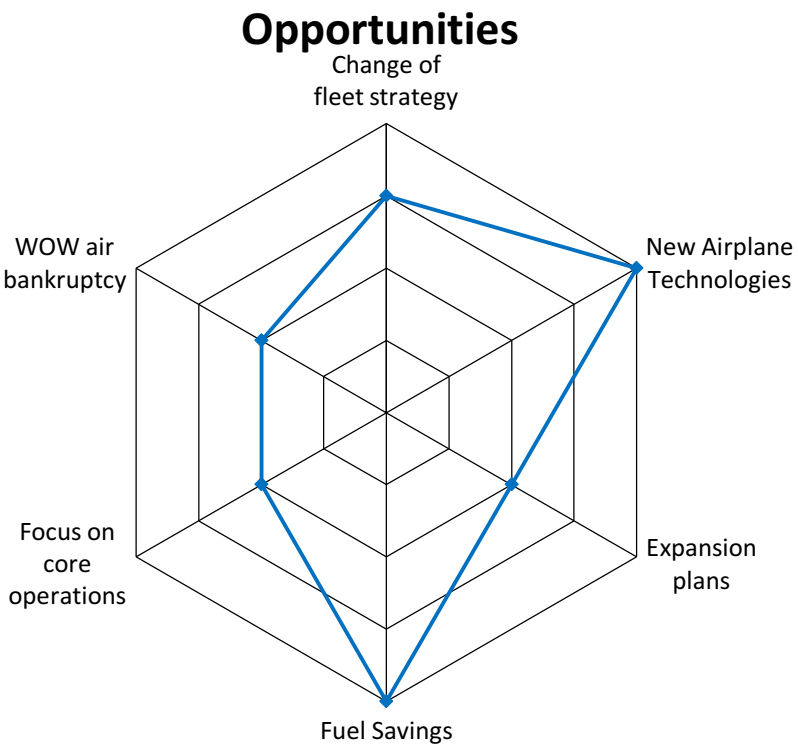
Expected passenger mix change in between 2018-2019



5.3.3 Opportunity

Figure 5.14

Opportunity



Based on authors judgment

As mentioned earlier, the current fleet strategy is under review where three possibilities are considered. One of those possibilities is to shift part of the company's fleet over to Airbus airplanes. Adopting airplanes from another manufacturer would require training of employees and staff, which can be costly, to begin with. The change would, however, grant Icelandair a higher bargaining power towards its suppliers as the cost of substitution would decrease after the adoption of the new manufacturer. The change would also minimize the risk of only operating airplanes from a single manufacturer if similar groundings like on the Boeing MAX aircrafts came into action in the future.

Airbus has announced that it expects to be able to offer new types of extra long-range single-aisle airplanes in 2023. This new aircraft technology can provide airlines with the option to offer long-haul flights in smaller and more fuel-efficient aircrafts than ever before. By adding such types of aircrafts to its fleet, Icelandair could tap into markets they have not been able to service previously.

Icelandair announced its plan to follow WOW air´s example and expand into the Asian market in 2018 (Sigurjónsson, n.d.). This plan, however, never came into action as market conditions became unfavorable. Asia is one of the fastest-growing continents in terms of rising GDP per capita, and air travel demand increase. New aircraft technology could allow Icelandair to revisit its plan and potentially become a hub between America and Asia. Further if Icelandair is successful in utilizing Cape Verde´s geological position, it could have a very positive impact on the company´s route network expansion plans.

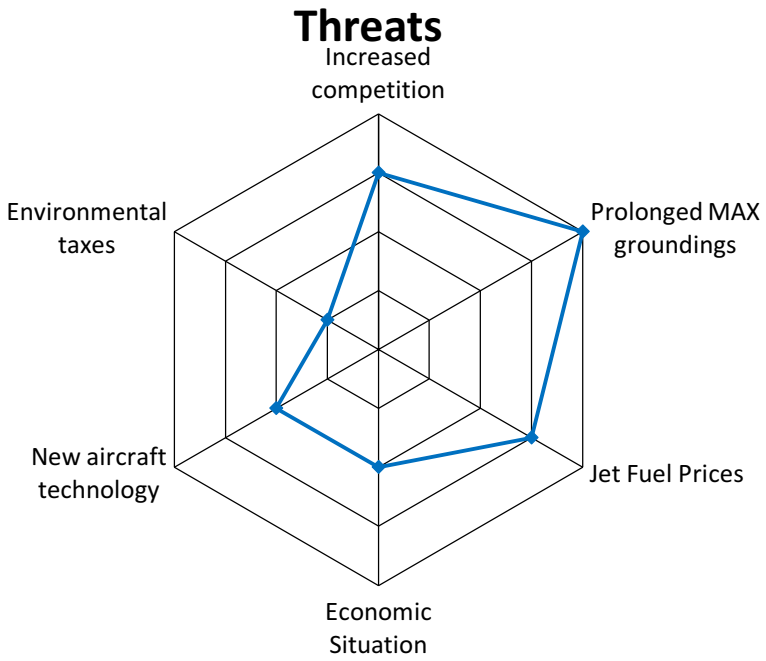
By renewing its fleet, Icelandair could reduce their fuel costs drastically. Aircrafts like the MAX and A320 can save up to 20% in fuel compared to the older planes the airline is currently operating. New aircrafts do not require as much maintenance as the older planes, which in hand can decrease operating costs for airlines that operate a young fleet (Dixon, 2006).

The strategic decision to shift the focus on Icelandair´s core operation offers the company a chance to offload unprofitable business segments and make the operations more profitable. The bankruptcy of WOW air means increased the supply of skilled staff that is experienced in operating Airbus aircrafts. Icelandair can hire former WOW air employees and tap into their experience and knowledge to improve their operations and make their potential shift to airbus aircrafts easier.

5.3.4 Threats

Figure 5.15

Threats



Based on authors judgment

The group "We are back" have already started the preparations of a new airline. The group has applied for an Icelandic AOC license, rented an office, and hired employees (n.d.-c). The arrival of a new budget airline into the Icelandic market could have significant effects on Icelandair's operations. The harsh competition with WOW air drove Icelandair to make decisions regarding their route network that did not go as planned. A new budget airline, flying within the same route network, will likely have a negative effect on the load factor of Icelandair. The arrival of a new airline to the Icelandic market is a significant threat to Icelandair´s operation.

The groundings of the MAX planes, which was at first only to last a few months, is now expected to be in effect until at least the end of 2019. The prolonged grounding of Icelandair's MAX planes has forced them to cancel flights, change their route network, lease new airplanes and consequently increased the fuel costs. The lease costs of older 737s have increased 40% over the last five months according to Phil Seymour, a CEO of an aerospace consulting company ("Used Boeing

Planes in High Demand as MAX Grounding Continues—Market Realist," n.d.). If the MAX planes are not allowed to fly soon, it could force Icelandair into making further undesirable changes to their operation.

Airlines rely heavily on jet fuel to keep their planes running. If the market price of jet fuel were to rise significantly it could have severe effects on the global airline industry. Even though Icelandair hedges some of their future jet fuel risks, they can eliminate part of the risk. The overall economic situation in both Europe and America will also affect the demand for air travel in these markets. Historically air travel demand has grown at a rate of 1,5 – 2 times the growth of GDP. If GDP growth in either of these markets decreases or even goes negative, it will likely have a negative effect on the demand for air travel.

New aircraft technology does present a threat to Icelandair´s position in the transatlantic market. The emergence of 180-220 seat airplanes, which can cover the distance of a wide-body aircraft, will diminish Iceland´s crucial geographical position between Europe and America. Finally, if government regulations regarding CO2 emissions change, and the price for emission allowance or carbon tax grow higher, it will affect the whole airline industry. The price per flown kilometer will rise, which would ultimately either force prices up or decrease the profit for airlines.

5.4 Strategic Analysis summary

The strategic analysis gives a short overview of the macro and micro level factors that can affect Icelandair´s operations. The PESTEL, Porters five forces and SWOT frameworks reveal various unequally important external and internal factors that we consider relevant. Icelandair is in a short-term lock-in situation where they are only able to operate Boeing aircrafts. The grounding of the MAX planes is not something that Icelandair could have foreseen, but they could have reduced their risk. Icelandair is currently operating on an old fleet of aircrafts which need to be replaced in the coming years. If Icelandair were to change their fleet strategy and start operating Airbus aircrafts along with Boeing, they could reduce the risk of something similar happening in the future. Further, the change could give them a higher bargaining power towards the manufacturers as the switching cost becomes less after the staff is trained to operate both types.

Icelandair is planning to shift its strategy by focusing on its core operation and expand its route network. The company was successful in expanding its network from 2014-2017 a returned a healthy

profit. New aircraft technology is one of the significant threats to Icelandair´s current hub and spoke network between the US and Europe. Fast-growing markets such as Asia and South-America could be the answer to the risk to the diminishing value of Iceland´s geological position. By utilizing new aircraft technology Icelandair can reach these markets, and by making use of the experience they have from their current hub and spoke model, Icelandair could become a success story. The entry of a new LCC into the Icelandic market could alter Icelandair´s strategy in the long-term, but the company has a great advantage to get ahead in the coming years while they are the sole airline based in Iceland.

6. Financial Analysis

6.1 Quality of the financial statement

Icelandair is listed on the NASDAQ OMX Iceland stock exchange and is therefore subject to applicable laws and regulations. Listed companies must publish an audited annual financial report no later than three months after the end of the fiscal year. In addition to that, there is an obligation to report a financial statement for the first three, six, and nine months of the fiscal year. The applied reporting standard is the International Financial Reporting Standard (IFRS), adopted by the European Union. Icelandair´s annual financial report is audited by KMPG, and for the 2018 annual report the following is stated: (Icelandair annual report, 2019)

> *„In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2018 and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and additional disclosure requirements for listed companies in Iceland. "*

6.2 Preparation of the financial statements

To be able to estimate and understand the value creation behind Icelandair´s operation, we separate operating items from financial items. Petersen, Plenborg & Kinserdal (2017) argue that it is easy to replicate a firm´s financial items. They further argue that the firm's operations are what makes it unique and is the primary driving force for value creation, which is difficult for others to replicate. It is therefore beneficial to separate those two items when analyzing the value a firm creates for its shareholders. We will analyze Icelandair's operating performance during a five-year historical period, from 2014 -2018.

6.2.1 The analytical income statement

In the analytical income statement, operating items are separated from financial items to understand and estimate the profitability of Icelandair's operations. The net operating profit after tax (NOPAT) and net financial expenses are calculated to see how the operations and financial items affect the income on year to year basis

Operating income

The reported income statements separate operating income from financial income. Icelandair's operating income is through transport revenue, aircraft and aircrew lease and other operating revenues. The largest source of income is through the core service of air transportation. Transport revenues are divided into three subcategories, passenger revenue, passenger ancillary revenues and cargo and mail with the largest source of income being passenger revenue. Under the IFRS 15 revenue standard, all service that is sold separately, such as baggage fees, in-flight sales, excess legroom, and Wi-Fi count as passenger revenues. With the implementation of IFRS 16 that changed and now counts as passenger ancillary revenues. Aircraft and aircrew lease is not subcategorized, but those revenues increased by 37% between 2017 and 2018 after a slight decrease in previous years. The increase is due to Icelandair's increased scope of charter business. Listed as other operating revenues are, sales at airports and hotels, revenue from tourists, aircraft and cargo handling services, maintenance revenue, gains from sale of operating assets and other operating revenues. During the five-year period, the ratio of each source of revenue is relatively constant. Transportation revenues are close to 73% of total operating revenue, revenues from aircraft and aircrew lease are around 7%, and other operating revenues are about 20%. Since the income statement separates between operating and financial income there is no need to analyze the income in greater details to separate operating items from financial items.

Operating expenses

As with the operating income, the operating expenses are separated from financial expenses in the reported statements. The main expenditures and those that are listed in the financial statements are salaries and other personnel expenses, aviation expenses, and other operating expenses. Under salaries and other personnel expenses are all employee-related cost, salaries, pension contribution and, other salary and personnel expenses. The cost associated with operating the firm's aircrafts is under Aviation expenses. That is aircraft fuel, lease, handling, landing, communication, and maintenance. Other operating expenses include advertising, customer service, tourism expenses, booking fees, and commissions. During the five-year period, there has been a steady increase in salaries and other personnel expenses as a percentage of total expenses.

EBITDA, EBIT, Financial items and Tax

To obtain the EBITDA, operating expenses are deducted from the operating income. Depreciation and amortization are stated in the financial statement. The depreciation and amortization can, to a large extent be attributed to the depreciation of Icelandair' fleet. By deducting the depreciation and amortization from the EBITDA, the EBIT is obtained. Since Icelandair separates operating income form financial income as well as operating expenses from financial expenses both EBITDA and EBIT are based on operating earnings only.

In the income statements tax is deducted from the EBT after net financial items have been deducted from the EBIT. To obtain the net operating profit after tax (NOPAT), an estimation of tax on operation needs to be made. Net financial expenses are deductible from corporate tax. Hence firms with debt are covered by the so-called tax shield and pay less corporate tax. It is, therefore, necessary to add back the tax advantage given by the net financial expenses to the NOPAT. To obtain the tax which arises from operations, the effective tax rate is calculated with Eq. 6.1

$$Effective\ tax\ rate = \frac{Income\ tax}{Profit\ (Loss)\ before\ tax} \tag{6.1}$$

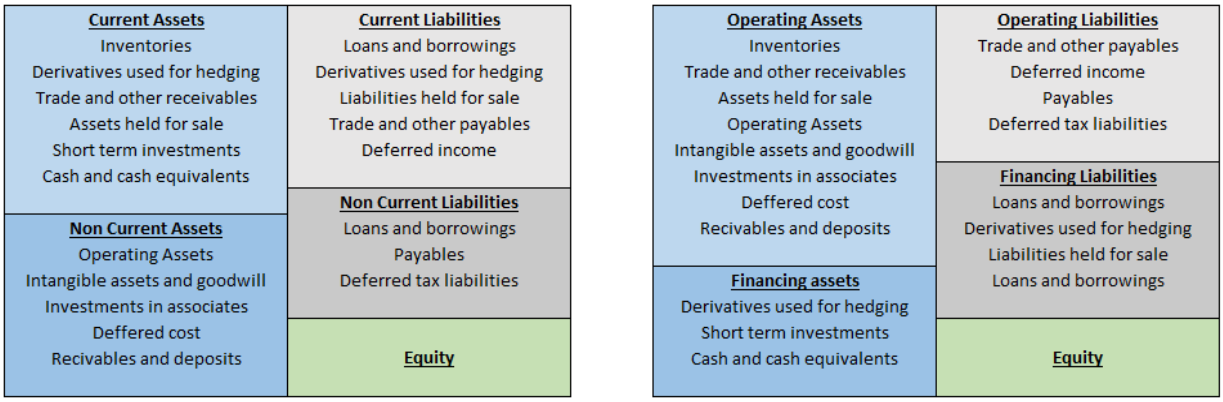
The NOPAT shows the profit or loss which the firm delivers with its operations only, with all financing activities excluded. NOPAT is obtained by deducting the effective tax rate from EBIT. We can then calculate the tax shield that arises from the debt. The tax shield is the net financial expenses times the effective tax rate. Finally, we obtain the net earnings, which is NOPAT plus net financial expenses after-tax, including the debt tax shield.

6.2.2 Analytical balance sheet

In the analytical balance sheet, assets and liabilities are separated into operating assets and operating liabilities and financial assets and financial liabilities. This is done to analyze how the firm generates profit. That is, how much capital has been invested in operations and how much return on the invested capital the operations generate. Figure 6.1 shows the difference between the balance sheet reported by Icelandair according to the IFRS and the analytical balance sheet. It also shows how the assets and liabilities are categorized as either operating or financing.

Figure 6.1

Traditional balance sheet and Analytical balance sheet



Source: Petersen, Plenborg & Kinserdal (2017), own creation

Clarification on how assets and liabilities are classified is following

Current assets

Inventories are considered as operating assets, Icelandair primary inventories lie in spare parts for their aircrafts which are used for operational purposes. Trades and other receivables are also considered to be operating assets. Trade receivables include services that have already been delivered but yet to be paid for. Assets held for sale include part of the group's hotel operations. Those assets are categorized as operating assets.

Short-term investments consist of investments in short-term securities, mainly bonds listed on stock exchanges. Since those assets are not part of the firm's operations, and they are considered to be financial assets. Derivatives used for heading are also considered as financial assets. Derivatives are financial instruments which gains and losses are not separated from being operating or financial activities which makes it impossible to separate, Petersen et al., (2017) argue that derivatives used for hedging should be considered as financial assets rather than operating assets. Icelandair's cash and cash equivalents account for approximately half of the total current assets. Although some of the cash holdings might be needed for day to day operations, all cash and cash equivalents are considered financial assets, for simplicity and consistency of the analysis.

Non-current assets

In the balance sheet, Icelandair defines aircrafts and flight equipment, buildings, and other property and equipment as operating assets. Intangible assets and goodwill are also classified as operating assets. Among the assets categorized as intangible are airport slots and trademarks which are used solely for operational purposes. Profit of associates is included in the income statement as operational profit. Therefore, investment in associates is regarded as an operational asset (Petersen et al., 2017). Deferred cost consists of prepaid operational expenses and is considered to be an operational asset. Non-current receivables consist mainly of prepayments on aircraft purchases and other security deposits. Those prepayments and deposits are for operational purposes. Hence deposits and receivables fall under operational assets.

Current liabilities

Trade and other payables are considered as operating liabilities as those liabilities arise from operational purposes. Icelandair classifies sold unused tickets and frequent flyer points as deferred income, which is part of operating activities and therefore classified as operating liability. Liabilities held for sale in relation to the hotel operation will be treated as operational liabilities.

Current loans and borrowings consist of unsecured bonds, bank overdrafts, and bank loans. Those are pure financial items and are considered as financial liabilities. As discussed in the previous section, derivatives used for hedging are regarded as a financial item. It is vital to maintain consistency throughout the analysis, so both due to the explanation in the previous section and for consistency purposes derivatives used for hedging is considered as a financial liability.

Non-current liabilities and equity

Non-current payables consist of the cost associated with an engine overhaul of leased aircrafts. The payables are due to operation and fall under operational liabilities. Deferred tax liabilities arise from the temporary difference from book value and tax value in the balance sheet (Petersen et al., 2017). It is difficult to estimate how much of the deferred tax is related to the operating income and how much is related to financial elements. Deferred tax does not carry interest, and for simplicity, it is considered operational liability only.

Long term loans and borrowing is considered an interest-bearing debt and is, therefore, a financial liability. The group's equity also requires a return and is therefore classified as a financial liability.

Net working capital and Invested capital

With the analytical balance sheet, it is easy to obtain the net working capital and invested capital. Net working capital is calculated as current operating assets minus the current operating liabilities. Invested capital or net operating assets is calculated as total operating assets, less total operating liabilities.

6.3 Choice of peers

To evaluate the operating performance of Icelandair, similar companies have been chosen for benchmarking purposes: To get the best estimation of the operating performance, the benchmarking companies operate within the same sector and under similar business models. For sufficient reporting quality and accounting standards, all companies used for benchmarking are publicly listed companies. The companies share similar operating characteristics, performance drivers, and operating risks. To compare the financial performance on a broader scale, companies from both Western Europe and North America have been chosen. Icelandair operates on both sides of the Atlantic Ocean, and therefore it is reasonable to analyze its operating performance and compare to both European and American counterparts. Table 6.1 list the companies that have been chosen for the performance evaluation analysis. All companies are listed on stock exchanges and use the IFRS as the applicable reporting standard, except for companies based and listed in the United States. Those companies operate under the ASC 842 reporting standard. Reported enterprise value is in USD.

Table 6.1

Peers used for benchmarking

Company	Reporting standard	Enterprise value	Geographical region
Air Canada	IFRS16	11.935	North America
Air France	IFRS16	10.609	Western Europe
American Airlines	ASC 842	43.810	North America
Delta Airlines	ASC 842	53.966	North America
EasyJet	IFRS16	4.516	Western Europe
FinnAir	IFRS16	1.921	Western Europe
Lufthansa	IFRS16	14.782	Western Europe
Norwegian	IFRS16	7.623	Western Europe
SAS	IFRS16	886	Western Europe
United Airlines	ASC 842	38.899	North America

Source: Bloomberg, own creation

6.4 Operating performance and profitability

In order to estimate Icelandair's operating performance and profitability, we perform a common size analysis to identify trends and in both revenue and expense items. We try to understand the key value drivers behind Icelandair's profitability and how those value drivers have evolved. Finally, we compare Icelandair's operating performance to the peers chosen in the previous section.

6.4.1 Common-size analysis

To understand the key drivers of Icelandair's operating performance, we apply the common size analysis. This analysis reveals the trends behind both income and expenses. The common-size analysis scales each income statement item as a percentage of total operating revenues. For the analysis, the analytical income statement, explained previously in this section is used. The results of the common size analysis are in figure 6.2.

Figure 6.2

Common size analysis

	2014	2015	2016	2017	2018
Operating Income					
Transport Revenue	72,8%	74,5%	73,7%	74,1%	72,4%
Aircraft and aircrew lease	6,7%	7,3%	6,6%	6,2%	8,0%
Other Operating revenue	20,4%	18,2%	19,7%	19,8%	19,7%
Total operating income	**100,0%**	**100,0%**	**100,0%**	**100,0%**	**100,0%**
Operating Expenses					
Salaries and other personnel expenses	-24,5%	-24,4%	-27,6%	-31,4%	-34,2%
Aviation expenses	-41,1%	-35,2%	-32,7%	-32,2%	-36,6%
Other Operating Expenses	-20,5%	-20,5%	-22,7%	-24,5%	-24,2%
Total operating expenses	**-86,1%**	**-80,1%**	**-82,9%**	**-88,0%**	**-94,9%**
EBITDA	**13,9%**	**19,9%**	**17,1%**	**12,0%**	**5,1%**
Depreciation & Amortization	-6,8%	-7,4%	-7,9%	-8,5%	-8,8%
EBIT	**7,1%**	**12,5%**	**9,2%**	**3,5%**	**-3,8%**
Tax on EBIT	-1,4%	-2,6%	-2,4%	-0,8%	0,7%
NOPAT	**5,7%**	**9,9%**	**6,8%**	**2,7%**	**-3,1%**
NFE	0,1%	-0,3%	0,1%	-0,1%	-0,8%
Tax shield	0,0%	-0,1%	0,0%	0,0%	0,1%
Profit of associates	0,0%	0,0%	0,1%	0,0%	0,1%
Net earnings	**5,8%**	**9,8%**	**6,9%**	**2,6%**	**-3,7%**

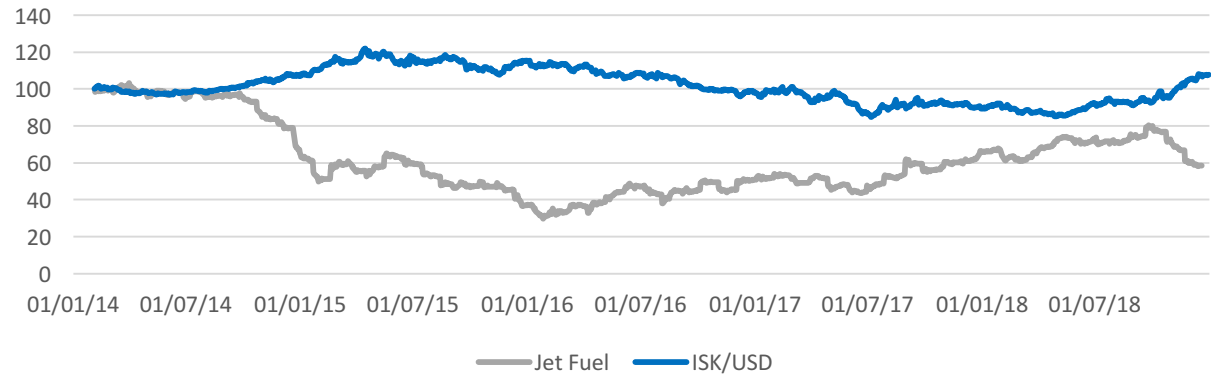
Source: Icelandair annual report, own creation

The income from the three major revenue streams is remarkably consistent over the five years. Income from transport revenue accounts for approximately 75% of the total operating income with aircraft and aircrew lease and other operating revenue adding up to the rest. On the expense side, there are some fluctuations from year-to-year. Salaries and other personnel expenses increase steadily over the period, from accounting for approximately 25% of total revenues in 2014 to above 34% in 2018. Aviation expenses decrease as a percentage of overall operating earnings from 2014 to 2017, going from 41% down to 32% in 2017. In 2018 the aviation expenses, however, increased to almost 37% of total operating income. Other operating expenses increase over the period, from approximately 21%

to just above 24%. That increase is primarily driven by increasing cost in customer service. The main drivers behind the fluctuations of both the salaries and other personnel expenses and the aviation expenses are the exchange rate between ISK and USD and the jet fuel price

Figure 6.3

Jet fuel and ISK/USD index



Source: Bloomberg, own creation

Figure 6.3 shows how both the price of jet fuel and the exchange rate of ISK to USD fluctuates over the period. Both are indexed at 100 at the beginning of 2014. As the figure shows, the ISK weakens compared to the USD from 2014 to 2015. The index reaches its peak at the beginning of March 2015 at 121. From that point, the ISK strengthens compared to the USD until around mid-2017 when the index reaches its lowest point at 85. From then the index fluctuates, and the ISK starts to strengthen again halfway through 2018 and reaches 108 at the end of the year.

Table 6.2

Yearly average of the ISK/USD index, 2014-2018

Year	ISK/USD index	Jet fuel price INDEX
2014	101,42	92,27
2015	114,54	52,37
2016	105,00	42,30
2017	92,72	52,90
2018	94,08	69,13

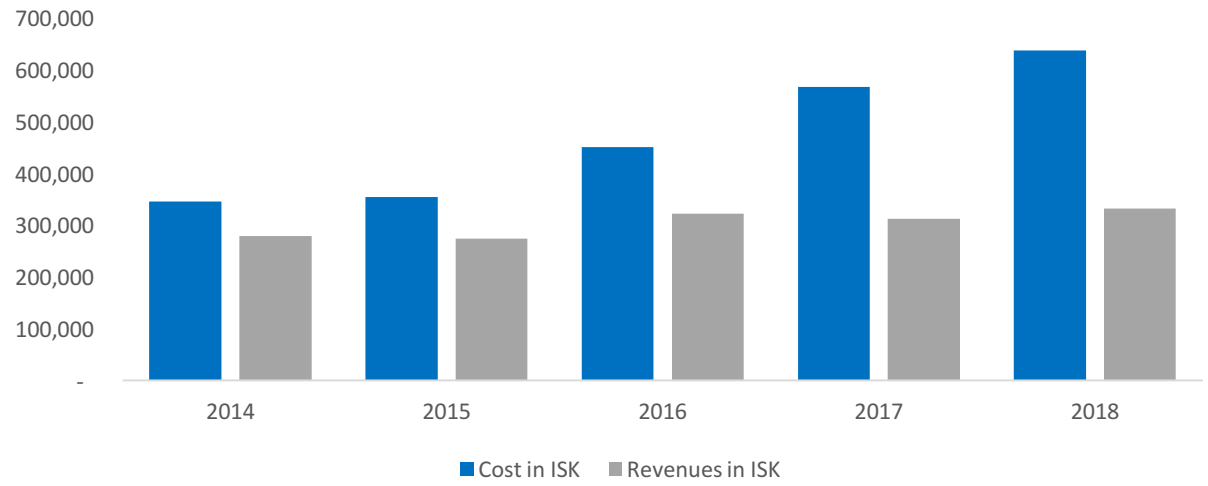
Source: Bloomberg, own creation

Table 6.2 shows the average of the jet fuel index and the ISK/USD index for all five years and how the ISK strengthens compared to USD from 2015 until 2018.

Icelandair pays most of its salaries in ISK. The dollar amount of salaries paid increases when the ISK strengthens compared to USD. Therefore, the dollar value of paid salaries is increasing as the ISK is strengthening from the beginning of 2015 until mid-2018. In addition to the salary increase discussed in section 5, this is the key driver for the increase we see in salaries and other personnel expenses we see in the common size analysis.

Figure 6.4

Icelandair exposure to ISK measured in thousand USD, 2014-2018



Source: Icelandair annual report, own creation

Figure 6.4 shows the deficit between the revenues in ISK, and the cost paid in ISK measured in USD. The difference between the two is increasing over the five-year period. This leads to increased exposure to currency fluctuations. The increase in the cost side can be explained by the stronger ISK compared to USD as discussed previously.

Going back to figure 6.3, we can see how the price of jet fuel has developed over the five-year period. Jet fuel priced is indexed at 100 at the beginning of 2014. The index fluctuates around 100 for the first nine months of 2014 before a significant drop during the last three months of 2014, dropping down to 61 by the end of 2014. Despite an upward movement during the first half of 2015, the index reached its lowest point of the period at the end of January 2016, dropping down to 30. From that

point, the index fluctuates with upwards movement until mid-2018 when reaches 80, but the drops decreases slightly during the end of 2018.

More than half of the aviation expense is jet fuel. Those price movements are, therefore, the key driver behind the changes we see under aviation expenses in the common size analysis. Icelandair hedges fuel price risk. According to their current policy, the hedge is between 40% and 60% of 9-12 months forward fuel consumption and up to 20% of future fuel consumption for the next 13-18 months. Because of the hedging policy, there is some lag to be expected when fuel expenses are considered. As for the difference of the index's average in 2014 and 2015, without hedging there would have been a steeper decline in aviation expenses.

Figure 6.5

Common size analysis, indexed

	2014	***2015***	***2016***	***2017***	***2018***
Operating Income					
Transport Revenue	100,0	104,7	116,9	129,5	134,8
Aircraft and aircrew lease	100,0	111,5	113,1	117,3	160,7
Other Operating revenue	100,0	91,2	111,3	123,1	130,6
Total operating income	**100,0**	**102,4**	**115,5**	**127,4**	**135,7**
Operating Expenses					
Salaries and other personnel expenses	100,0	101,8	129,7	163,0	188,9
Aviation expenses	100,0	87,7	91,9	99,7	120,9
Other Operating Expenses	100,0	102,3	127,5	151,7	160,0
Total operating expenses	**100,0**	**95,2**	**111,1**	**130,1**	**149,5**

Source: Icelandair annual report, own creation

Figure 6.5 shows how both the operating income and the operating expenses have developed since 2014. All sources of income and costs are indexed at 100 in 2014. Looking at the end of the year 2018, operating income has increased by 35.7% while the operating cost has increased by almost 50%. It is only in 2015 that the operating income has more extensive growth than the operating expenses. All other years, the expenses grow more than the income.

We see the effect of those shifts in the operating environment impacting the EBITDA margin from figure 6.2. During the five-year period. Favorable operating conditions, especially in 2015 and

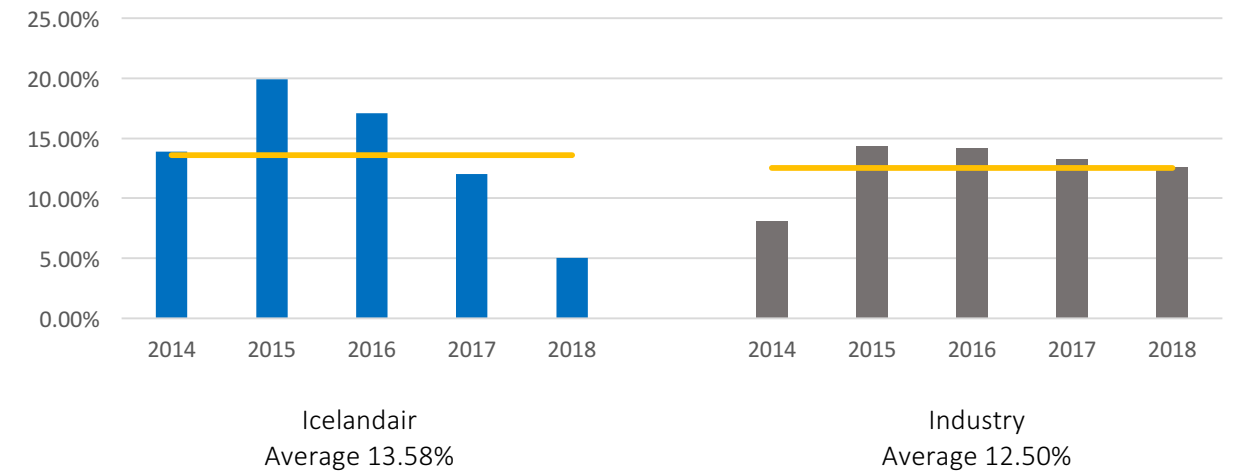
2016, lead to high EBITDA margins which then decline as the conditions become less favorable in 2017 and 2018. In 2018 the EBITDA margin was only 5% where operating expenses account for 95% of total operating income. The high operating cost is the result of the strengthening of the ISK and the increase in fuel prices. The currency index is on average 94, and the jet fuel index average is 69 compared to 93 and 53, respectively the year before.

There is a steady increase in depreciation and amortization as a percentage of total operating income during the period. That can be explained by the rise in the dollar amount of depreciation due to new aircrafts being added to the fleet every year. Due to the increase in depreciation and amortization, EBIT as a percentage of operating income is decreasing over the period when compared to the EBITDA.

6.4.2 EBITDA margin

Figure 6.6

EBITDA margin 2014-2018



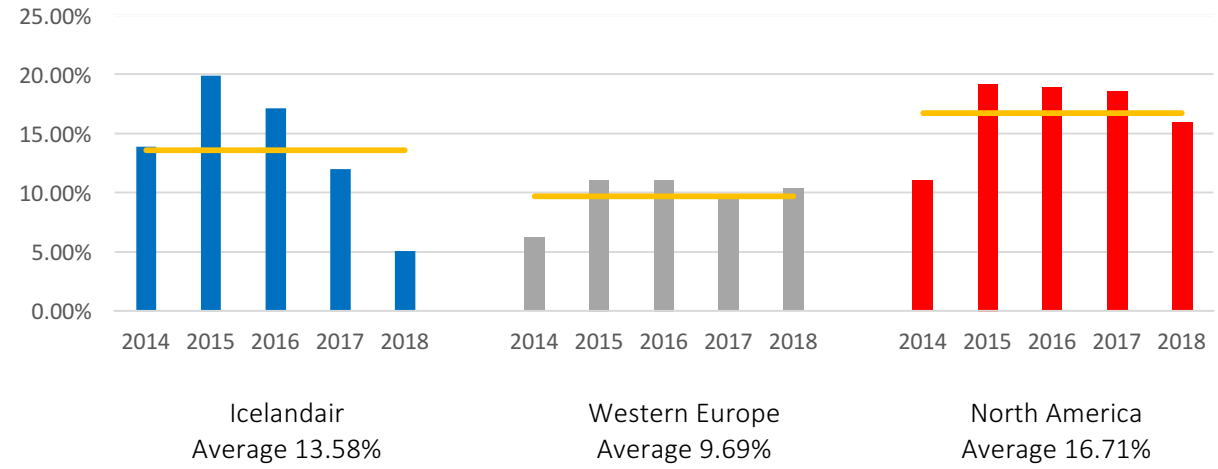
Source: Icelandair annual report, Bloomberg, own creation

When comparing Icelandair's operating performance to the peers chosen in the previous section, we observe similar trends. Figure 6.6 shows the EBITDA margin of both Icelandair and the ten selected companies for benchmarking purposes. Comparing all ten peers, both companies operating in Western Europe and North America there is a substantial growth in the EBITDA from 2014 to 2015 which is then followed by a decreasing EBITDA 2016, 2017 and 2018. The increase in jet fuel prices discussed earlier in this section seems to be affecting not only Icelandair but also the

industry in general. During the period Icelandair's average EBITDA ratio is higher than the industry's, but the volatility is higher. We observe a steeper decline in Icelandair's EBITDA margin from 2016 and onwards compared to the benchmark.

Figure 6.7

EBITDA margin 2014-2018



Source: Icelandair annual report, Bloomberg, own creation

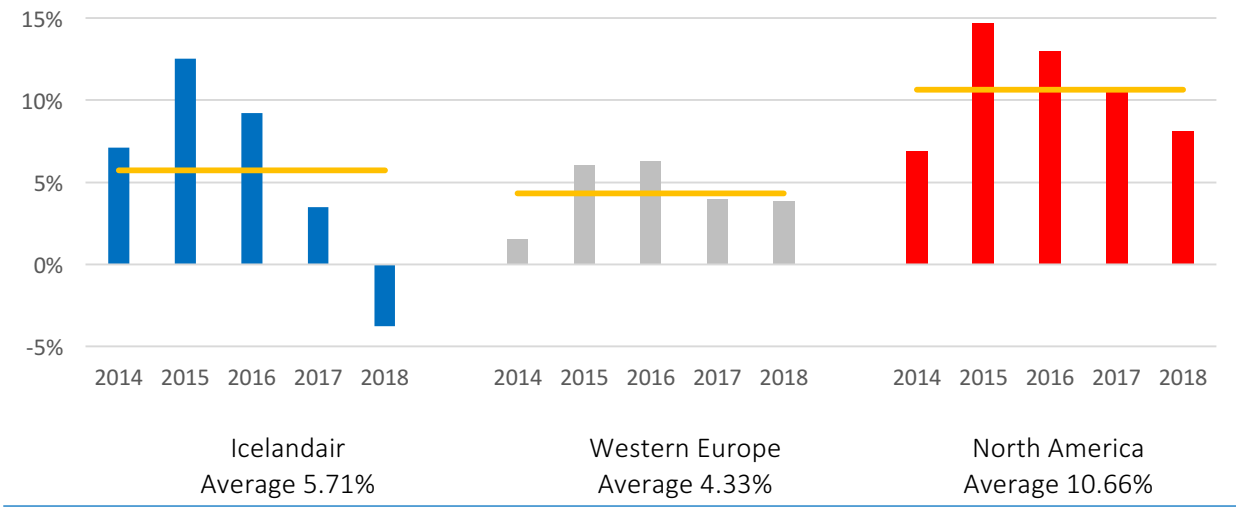
When separating the firms operating in Western Europe from those operating in North America, we still observe a similar trend in the EBITDA margin. The EBITDA margin is substantially lower for the firms operating in Europe. That is likely due to more competition and price pressure from low-cost carriers. Icelandair's average EBITDA margin is higher than their European counterparts but lower when compared to North American peers. We still observe the effects of the jet fuel price on the EBITDA margin for companies operating in both continents.

Interestingly, the correlation between the EBITDA margins of the two benchmarking groups is 0.97. Icelandair's EBITDA margin correlation with the average of all ten peers is less than 0.20. As discussed previously, Icelandair is affected by the fluctuation of the ISK while the other companies do not face the same currency exposure. The fluctuation of the ISK could be affecting the correlation of the EBITDA margin with the benchmark.

6.4.3 EBIT margin

Figure 6.8

EBIT margin 2014-2018



Source: Icelandair annual report, Bloomberg, own creation

EBIT margin follows a similar trend to what we see in the EBITDA margin. The difference between the two is the effect of depreciation and amortization. In 2014, 2015 and 2016 Icelandair delivers a substantially higher EBIT margin than their European peers and follow a somewhat similar trend to the American peers. However, as discussed previously, external factors have a significant impact on Icelandair in 2017 and 2018, where the EBIT margin drops in 2017 and is negative in 2018.

6.4.4 Return on invested capital

To measure the profitability of Icelandair's operation, we look at the return of invested capital (ROIC). ROIC is a financial ratio that shows the returns that a company generates from its operations. It measures the returns a company is able to generate on the capital that has been invested in it. Investors can then compare their required return to the ROIC (Petersen et al., 2017). We calculate ROIC with equation 6.2

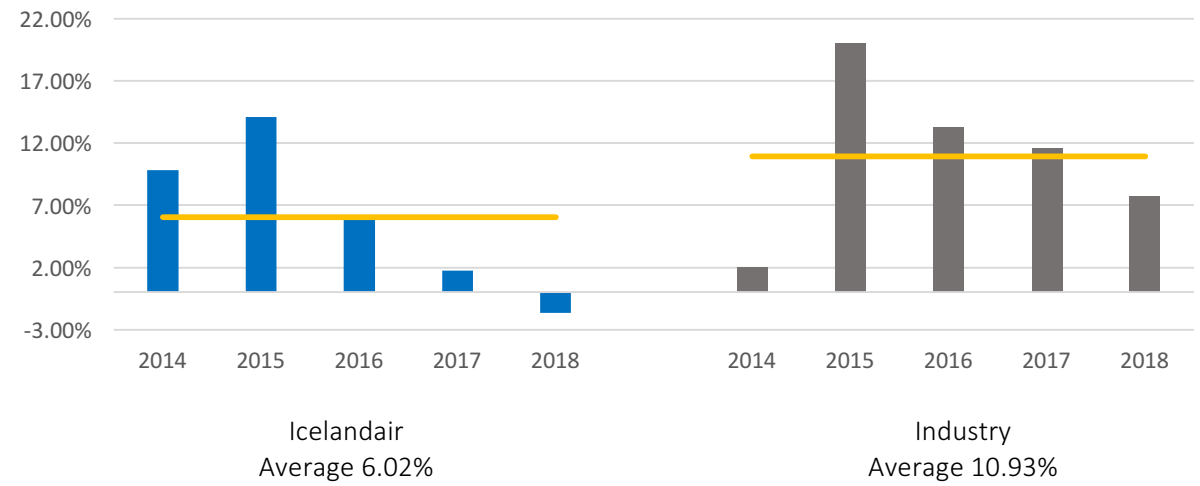
$$ROIC = \frac{Net\ Operating\ Profit\ After\ Tax}{Invested\ Capital} \tag{6.2}$$

As the equation shows, ROIC measures how much the value the operations deliver, without considering financial items. Petersen et al. (2017) argue that ROIC is the best way to measure how much value a company is generating for its shareholders.

Figure 6.9 shows Icelandair's ROIC benchmarked to the industry.

Figure 6.9

Return on invested capital 2014-2018



Source: Icelandair annual report, Bloomberg, own creation

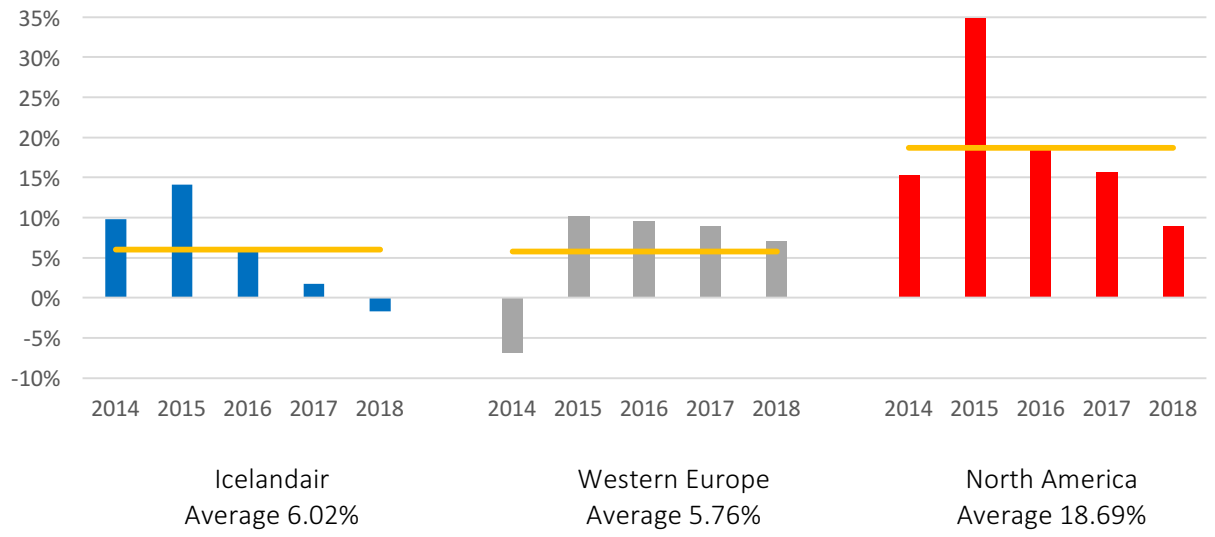
Icelandair's ROIC increases from 9.8% to 14.1% between 2014 and 2015 as the operating environment improves, both jet fuel prices and the exchange ratio between ISK and USD become more favorable. In 2016 the ROIC dropped to 6.1% as conditions get less favorable. The decrease in ROIC continues throughout the period, and in 2018 the ROIC is -1.7%.

The trend of Icelandair's ROIC is similar to the industry's benchmark and is correlated with the price movements of jet fuel. However, the average ROIC over the five-year period is lower for Icelandair when compared to the industry.

Figure 6.10 breaks the industry down to peers from Western Europe and peers from North America. Icelandair's average ROIC is similar to their European counterparts. For Icelandair, ROIC decreases more as the operating conditions deteriorate compared to both sets of peers. That is likely to be due to the currency shifts, which also influence the operating profitability. Peers from North America are however able to generate much higher returns on their invested capital, but as we see from the figure, the profitability also suffers after 2015. Compared to the EBITDA margin, ROIC decreases more rapidly as operating conditions deteriorate.

Figure 6.10

Return on invested capital 2014-2018

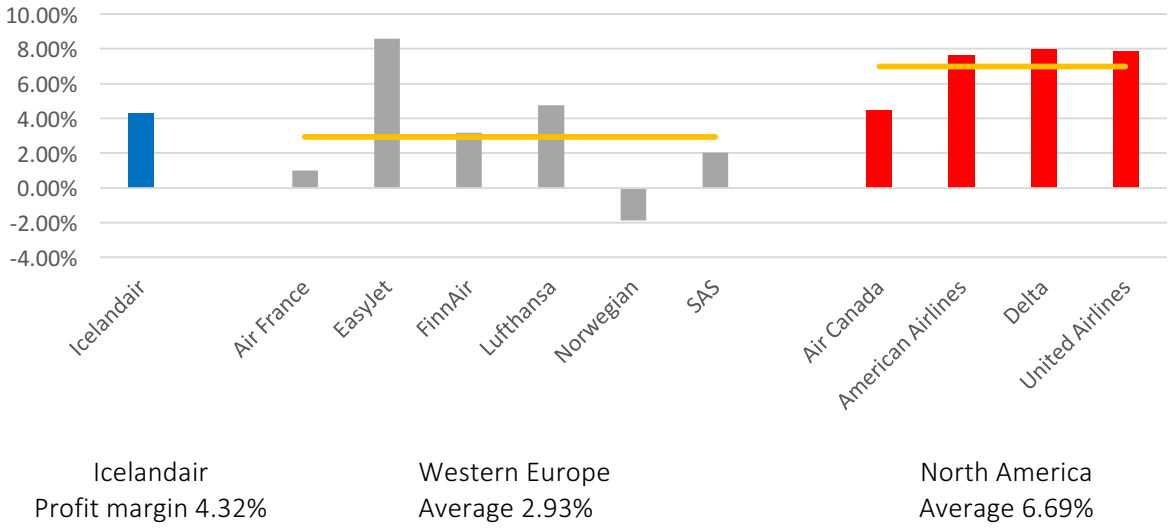


Source: Bloomberg, own creation

6.4.5 Profit margin

Figure 6.11

Average profit margin 2014-2018



Source: Bloomberg, own creation

The profit margin of a company shows how large part of the revenues the company manages to generate as a profit after all expenses such as cost, depreciation, tax, and interests. Figure 6.11 shows the average profit margin of all peers we use for benchmarking over the five-year period. The yellow line represents the average of both peer groups. As discussed in section 3, the aviation industry has delivered one of the lowest profits of all industries historically. We can see from the figure that the profit margins for the firms operating in Europe are very low, only 2.93% on average during the five year period. It is however substantially higher for the North American peers whose profit margin is 6.69% on average. Icelandair is somewhere in between the two peer groups, with an average profit margin of 4.32%. In 2015, its profit margin was close to 10% but had then continually declined as the EBITDA margin previously analyzed indicates. These results are in line with what we saw in the EBITDA margin where Icelandair´s EBITDA margin was slightly above their European counterparts but somewhat lower than their peers from North America. Despite the higher profitability, Icelandair's ROIC is only marginally higher than the European peer group. The reason for Icelandair´s higher average profitability could be related to how its operations are financed. Firms with lower financial leverage pay less interest on their debt which has then positively related to the profit margin.

6.5 Financing of operations

6.5.1 Financial leverage

Figure 6.12

Financial leverage, 2014-2018

	2014	2015	2016	2017	2018
Icelandair	0,6	0,4	0,7	1,2	2,4
Air France	10,0	10,9	13,9	4,7	6,7
EasyJet	0,4	0,4	0,7	0,7	0,7
FinnAir	4,3	1,9	3,2	1,1	3,3
Lufthansa	4,1	3,9	4,8	1,8	3,1
Norwegian	2,1	2,5	3,3	6,6	6,9
SAS	6,5	4,4	5,1	2,9	3,4
Air Canada	3,5	4,5	3,7	2,0	2,2
American Airlines	1,1	1,6	2,0	2,2	4,1
Delta	1,1	1,1	1,1	1,0	1,4
United Airlines	1,4	1,5	1,4	1,7	1,7
Peers Average	**3,5**	**3,3**	**3,9**	**2,5**	**3,3**

Source: Bloomberg, own creation

Icelandair's financial leverage has increased during the five-year period. Financial leverage takes into account the market value of equity and total liabilities. Financial leverage is, therefore, negatively related to the market value of equity. That partially explains the increase from 2015 to 2018 as the market value of equity, i.e. the stock price of Icelandair has decreased during the period. In addition to that, Icelandair has more than doubled its liabilities during the period. Despite the increase, Icelandair is below the industry average in all years. As we can see from table 6.3, the financial leverage of the aviation industry is quite high indicating that it is a capital heavy industry. That is no surprise as holding out a fleet of aircrafts requires a significant amount of capital. The financial leverage of peer companies differ. Firms operating in Western Europe have on average significantly higher financial leverage when compared to firms operating in North America. During the entire five-year period, the European firms have financial leverage of 4.1 on average compared to 2.0 of their American counterparts. Icelandair´s average financial leverage throughout the period is only 1.0 which is significantly lower than the two peer groups.

These results are in line with our suggestions in the previous section about the profit margin. Since Icelandair has substantially lower leverage than the European peer group, they have less financial expenses which positively affects the profit margin. This also suggests that Icelandair has lower long-term liquidity risk as they have higher capital buffer for unseen events such as an economic downturn.

6.5.2 Current ratio

Figure 6.13

Current ratio, 2014-2018

	2014	2015	2016	2017	2018
Icelandair	0,83	0,80	0,92	0,99	0,71
Air France	0,61	0,63	0,75	0,75	0,63
EasyJet	0,89	0,72	0,92	1,04	0,97
FinnAir	0,99	1,24	1,45	1,28	1,07
Lufthansa	0,75	0,72	0,93	0,87	0,66
Norwegian	0,45	0,48	0,43	0,56	0,43
SAS	0,79	0,86	0,78	0,81	0,88
Air Canada	0,98	1,08	0,98	1,06	1,24
American Airlines	0,88	0,73	0,74	0,60	0,48
Delta	0,54	0,52	0,49	0,41	0,34
United Airlines	0,60	0,63	0,59	0,56	0,51
Peers Average	0,75	0,76	0,81	0,79	0,72

Source: Bloomberg, own creation

The current ratio shows how likely a firm is to cover its current liabilities with current assets in case of liquidation. A current ratio of 1.0 or higher suggests that current assets will be able to cover current liabilities and therefore, a low short-term liquidity risk, (Petersen et al., 2017). Icelandair´s current ratio is in line with what we observe for the European peers, the average current ratio during the period is the same, 0.81. The current ratio for the North American peers is lower, or 0.70 on average. We can conclude that the European firms and Icelandair have less short-term credit risk than the North American firms.

During 2018, Icelandair breached specific bond category covenants, giving bondholders the right to request repurchase of all the bonds in that category between the 30th of June and 15th of July.

Due to the right to repurchase, the bonds are considered as short-term financing or current liability in 2018. The bonds were refinanced in 2019. This explains the drop we see in Icelandair´s current ratio between 2017 and 2018. If we assume that those bonds are used for long-term financing, the current ratio is close to 1.0.

6.6 Financial analysis summary

The primary value driver for profitability in the airline industry is the price of jet fuel. During the historical five-year period, we observe severe fluctuations in the jet fuel price. It declines steadily from late 2014 and reaches its lowest point at the beginning of 2016. From that point, we see a price increase until late 2018, where prices decline slightly. The effects of this price changes in jet fuel explain the trend we observe in the industry's operating performance. The return on invested capital peaks in 2015 but decreases as the jet fuel price increases. Icelandair is also exposed to the exchange rate of the ISK/USD. The vast majority of their salaries are paid in ISK while less than 25% of their revenues are in ISK. This creates a deficit and net exposure to currency fluctuations. For the first part of the period we see the ISK weakening compared to the USD, creating a somewhat optimal operating environment for Icelandair with the price of jet fuel also low. However, similarly to the jet fuel price, the ISK strengthens from the beginning of year 2016 until late 2018, creating an unfavorable operating environment. We observe the effect of those fluctuations when we compare the Icelandair´s EBITDA margin and ROIC to the industry benchmark. Both ratios have a steeper decline after 2015, indicating the effect of the currency volatility on Icelandair´s profitability.

Despite the poor operating outcome in both 2017 and 2018, Icelandair´s financial position is strong when compared to the industry benchmark. The financial leverage is low, indicating a low long-term liquidity risk. Due to the capital intensity of the industry, many of the benchmarking companies have high financial leverage. Icelandair´s current ratio is close to one, indicating that their current assets are similar to their current liabilities and the short-term liquidity risk is therefore low.

Overall, Icelandair is financially stable, but the two key value drivers, jet fuel price, and the exchange rate of ISK/USD profoundly affect its operating performance and profitability.

7. Forecast

7.1 The forecast period and presumptions

When conducting a forecast, it is essential to set a relevant time frame. The most frequently used forecasting period is five years but can differ depending on the market, the development stage of the company, and the predictability of its financial performance. In mature companies that operate in a stable and established industry, a five year period should be sufficient for the company to reach its steady-state (Rosenbaum & Pearl, 2013). When the company has reached what is called a steady-state, it is assumed that future cash flows of the firm will be relatively stable. To account for the future beyond the forecasted period, a so-called terminal value is computed and used as a proxy for future cash flows.

We estimate that a five-year horizon is enough for Icelandair to be able to stabilize their operation for the long-term terminal value. Icelandair is in the process of divesting non-core business units that are either unprofitable or unwanted. Icelandair is currently in a unique position in the home market being the only Icelandic airline. Further, there are no foreseeable competitive alternatives to air travel for travelers to and from Iceland. The time span of the grounding of the Boeing MAX aircrafts is still not clear, but it is estimated that the aircrafts will be operational in early 2020. In the coming years, we expect that Icelandair will be able to continue growing their route network through current and new destinations.

As has been mentioned throughout this project, Icelandair is operating in a fast-changing environment where external factors have had a significant impact on the company's operations. Many external and internal factors are unknown about the company´s operation in the imminent future. We assume that the Boeing MAX 8 aircrafts will be fully operational in early 2020, which is in line with Icelandair's executives' expectations. We further assume that jet fuel prices will remain at current level and that the company is not affected by an unforeseeable hit during the forecasted period. The forecast concludes that the entry of a new LCC into the Icelandic market is imminent in late 2020

7.2 Value drivers

The value drivers that are used for the forecasting are presented in table 7.1.

Table 7.1

Value drivers

Income statement Items:

- 7.2.1 Revenue Growth:
  - Transport Revenue
  - Aircraft and aircrew lease
  - Other operating revenue
- 7.2.2 Operating Expenses:
  - Salaries and other personnel expenses
  - Aviation expenses
  - Other operating expenses
- 7.2.3 Depreciation
- 7.2.4 Tax Rates
- 7.2.5 Interest Rates

Balance sheet items:

- 7.2.6 Intangible & tangible assets as % of revenue
- 7.2.7 Net Working capital as % of revenue
  - Inventories
  - Trade and other receivables
  - Assets held for sale
  - Trade and other payables
  - Deferred income
- 7.2.8 Capital expenditure
- 7.2.9 Net Interest-bearing debt as a % of invested capital

Income statement items

7.2.1 Revenue growth

The most important value drivers for Icelandair are the operating revenues and operating expenses. When forecasting the transport revenue growth, the outcome is derived from both volume and price. We assume that the passenger part of transport revenue is a product of volume (quantity of customers) and price (amount paid per customer) where volume is revenue-passenger-kilometers (RPK) and the price is RPK divided by transport revenue. Aircraft and aircrew lease will be estimated

using sold block hours and fleet utilization. Revenue passenger kilometers is calculated with equation 7.1.

$$RPK = Available\ Seat\ kilometers * Load\ factor \quad (7.1)$$

Other operating revenue will be split into three categories: sale at airports and hotels, revenue from tourism, and other operating revenue.

Transport Revenue

When forecasting the transport revenue growth, we first look at the historical price development and then add on the expected inflation expectation for the period. The historical price development of Icelandair's represents market conditions where another LCC is operating in the Icelandic market. The transport revenue is split into three subcategories; passenger revenue, passenger ancillary revenue and cargo and mail. The transport revenue represents flight revenue, excluding Loftleiðir Group. To forecast the passenger revenue, we use the average price per revenue passenger kilometers. The average price per passenger revenue kilometer is calculated with equation 7.2.

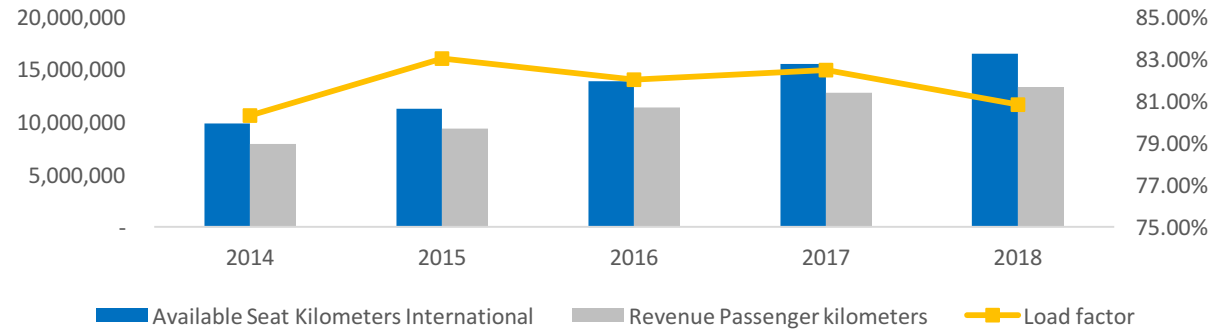
$$Average\ price\ per\ revenue\ passenger\ kilometer = \frac{Transport\ revenue}{RPK} \quad (7.2)$$

The revenue from passenger ancillary will be calculated as a % of passenger revenue, while the cargo and mail revenue will be calculated as revenue per freight ton-kilometers.

Icelandair has been operating with a load factor of around 80.3% - 83% over the past five years. The company increased its ASK by 67% from 2014 to 2018, while RPK increased by 68%. The historical development of ASK, RPK, and load factor of Icelandair is presented in figure 7.1.

Figure 7.1

ASK, RPK & Load factor 2014 – 2018



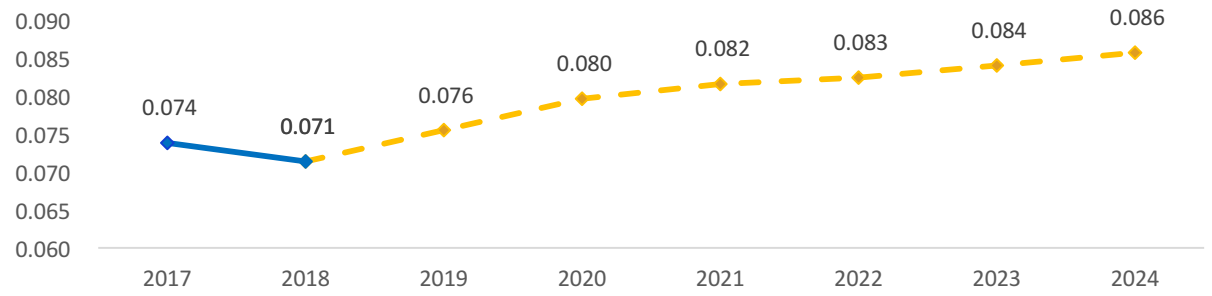
Source: Icelandair annual report, own creation

Because of a change in accounting standards in 2017, we were only able to break down the average price per passenger revenue kilometer for 2017 and 2018. The average price per passenger-kilometer in 2017 was 0,074 and 0,071 in 2018.

According to the IMF, the expected inflation in Iceland is 2.8% in 2019 and 2.5% from 2020-2024(Monetary Fund, 2019f). We assume that the price development will outgrow the inflation rate by an average of 3% until year-end 2020. We estimate this short-term price increase because of the bankruptcy of WOW air, and the gap it has left in the market. Further, we anticipate that the groundings of the MAX planes have put greater pressure on the price level for Icelandair. We expect that the price increase in 2021 will only be driven by inflation, as a result of a new LCC entry to the Icelandic market in late 2020. This is mainly due to the competitive factors that we believe exists in the market. Consumers have easy access to price information from most airlines that fly each route and are able to make conscious decisions regarding their flights based on price and quality. If the new LCC would compete on the same routes as Icelandair, it is likely that it would keep Icelandair from raising prices excessively. We also believe that Icelandair will be able to increase their fuel efficiency as the MAX planes enter service, hence allow them to capitalize on the increased efficiency through lower operating costs. The yearly price increase is forecasted to be reduced between 2022-2023 and ultimately enter a stable level of 2% in the terminal period. The forecasted price pr. RPK development is shown in figure 7.2.

Figure 7.2

Price per RPK forecasted

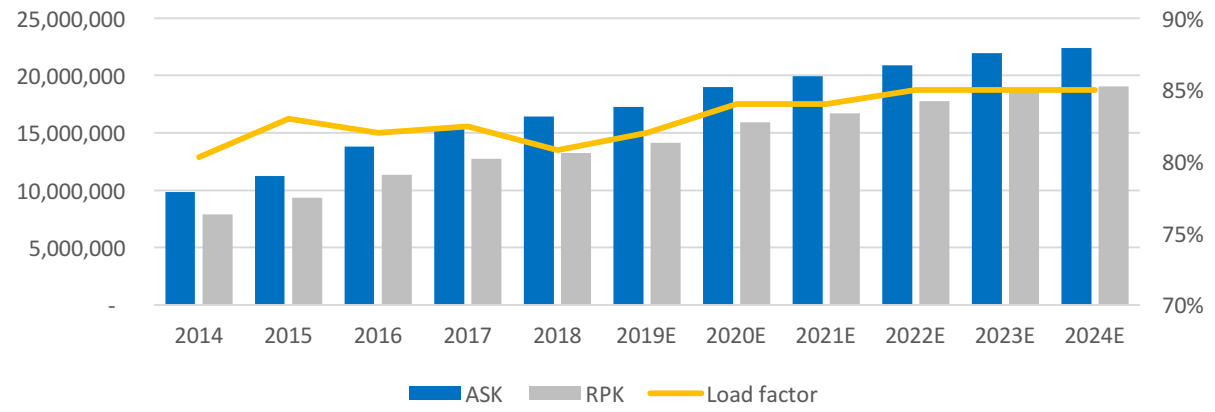


Source: Icelandair annual report, own creation

We expect the load factor to grow from 82% in 2019 to 85% in 2021. The forecast presumes that the MAX planes will be operational in early 2020 and that Icelandair will receive the rest of the planes they were supposed to get delivered in 2019. The demand for air travel has been growing fast in the past decades and is expected to continue to grow in the coming years. We expect that the route network hence ASK will continue to grow in 2019. To estimate the growth in 2019, we use the growth levels from Q2 2018 compared with Q2 2019. In 2020 we expect the growth to be at similar levels as from 2014-2018 or 10%, the main driver in the growth will be through operations of the MAX planes and increased market share in light of WOW air bankruptcy. From 2021-2023 we expect that the growth will be more stable or 5%. The terminal period growth is expected to be 2%. The expected development of ASK and load factor are stated in figure 7.3. Despite the growing markets in both Asia and South-America, we do not expect Icelandair to expand their network into those markets during the forecasted period. In light of WOW air's unsuccessful attempt to connect Iceland with India and operating difficulties in recent years we expect Icelandair to focus on improving current operations and capitalizing on the space WOW air leaves in the market. However, with new aircrafts with increased flying range, we believe Icelandair should seriously consider entering the emerging markets in near future.

Figure 7.3

ASK & Load factor forecasted

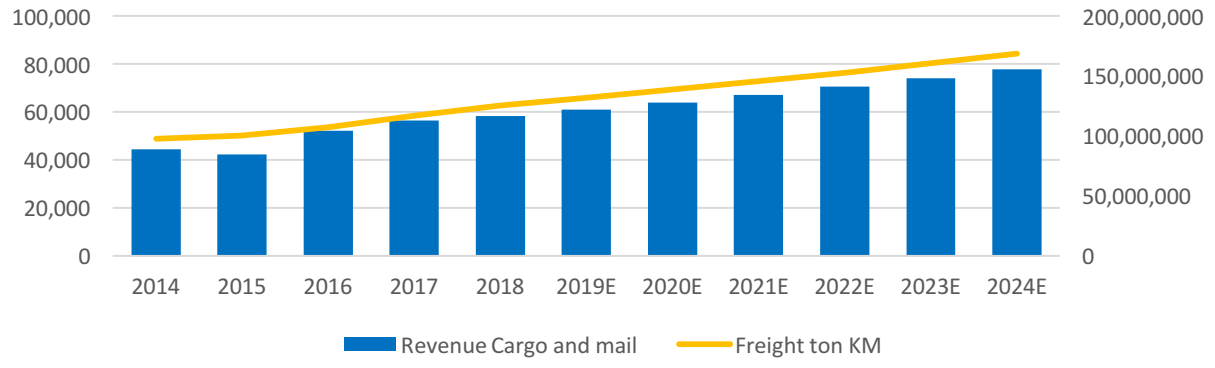


Source: Icelandair annual report, own creation

The cargo and mail operations freight ton-kilometers (FTK) grew 7.4% between 2017-2018. Since the available cargo space is somewhat correlated to ASK, because of available cargo space in passenger aircrafts, we believe that the cargo business is moderately correlated with the growth in ASK. We however also expect that Icelandair will be able to grow their cargo business further and assume a constant growth of 5% in the forecast. We believe that price per freight ton will stay the same over the forecasted period. The price per freight ton is estimated as the average from 2014-2018. The development of FTK and revenue from cargo and mail are presented in figure 7.4.

Figure 7.4

Freight ton KM and revenue from cargo and mail forecast, in thousand USD

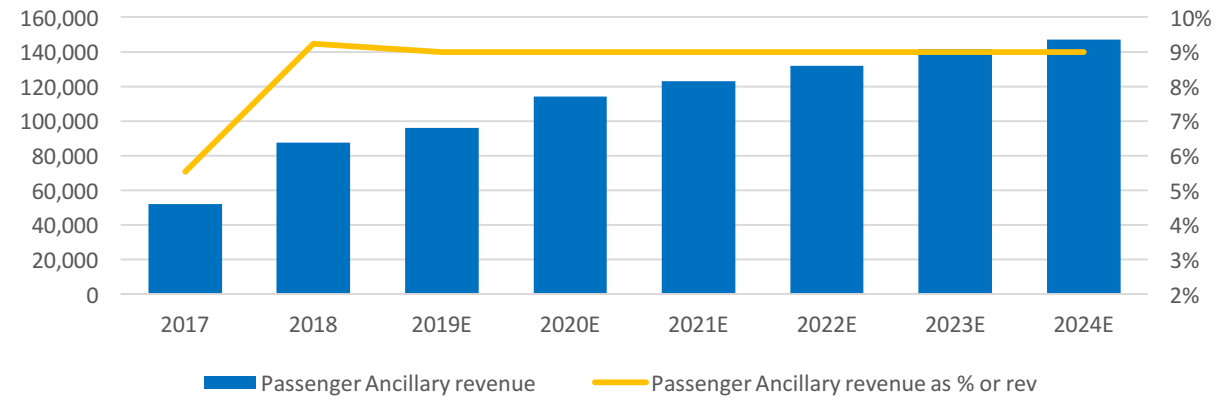


Source: Icelandair annual report, own creation

The passenger ancillary revenue is calculated as a percentage of passenger revenue. In 2017 and 2018, the average rate of passenger ancillary as a percentage of passenger revenue was 5.5% 9.2% respectively. In 2017 Icelandair incorporated some of LCC's attributes, such as charging for seat allocation at check-in and extra charge for checked-in baggage. We don´t see any clear indicators from the financial and strategic analysis that is likely to affect the ancillary revenue. We, therefore, believe that the rate will be a constant of 9% throughout the forecasted period. The forecasted development of ancillary passenger revenue is stated in figure 7.5.

Figure 7.5

Passenger Ancillary revenue forecast, in thousand USD



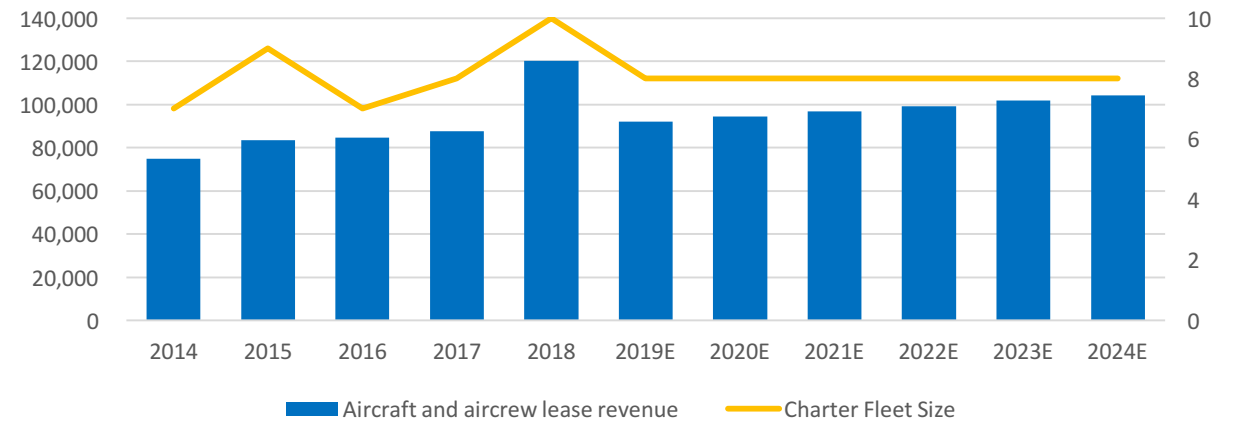
Source: Icelandair annual report, own creation

Aircraft and aircrew lease

We do not expect that the revenue of the charter business will suffer directly from the factors that have been mentioned earlier in this project. We do consider that in 2018 the charter business was operating ten aircrafts but have reduced to eight in 2019, which is the same number of aircrafts as in 2017. We, therefore, expect that the charter business will yield a similar income in 2019 as in 2017. The forecasted period assumes that throughout the period, the charter business will operate eight aircrafts. We also assume that the only effects on revenue will be a 2.5% increase due to the forecasted inflation and it will prevail throughout the forecast. The historical development and forecast are presented in figure 7.6.

Figure 7.6

Aircraft & Aircrew lease revenue 2014 – 2024, in thousand USD



Source: Icelandair annual report, own creation

Other operating revenue

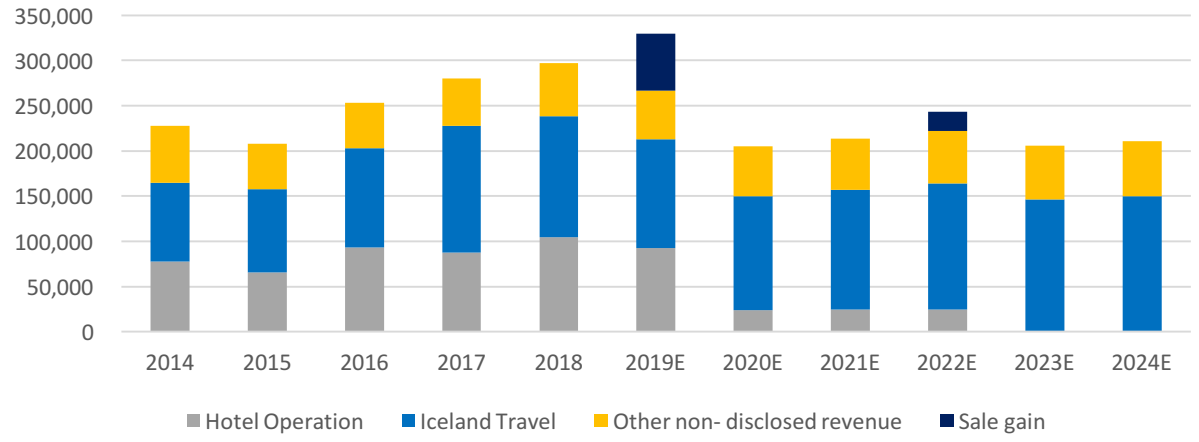
Other operating revenue is specified as three different segments: sale in hotels and airports, revenue from tourism and other non-disclosed revenue. We assume that these parts of Icelandair´s operation will not be affected by the factors discussed earlier in the project. Icelandair has reached an agreement to sell off its hotel operations. The sales agreements state that Icelandair will hold a 25% equity share from year-end 2019 and for a minimum of three years. In the forecast, from 2020, we only consider 25% of the forecasted income of the hotel operation until 2023, when we assume the operations are divested in full. The tourism services are regarded by Icelandair as assets held for sale, but since no agreement has been made regarding the sale, we presume that the operation will be held throughout the forecasted period. We forecast that the tourism services will grow by 5% per year until 2024, and the terminal value growth will be 2.5% per year. Other non-disclosed revenue will be regarded as a constant growing 2.5% per year.

The enterprise value of the hotel operations is 156 million USD, the final payment received by Icelandair will depend on the amount of net working capital and net interest-bearing debt at the end of 2019. We assume, for simplicity, that the price paid will be 83.8 million USD. The price is the enterprise value minus the debts of the hotel operation at year-end 2018 (Icelandair, 2018). We assume that 75% of the price, USD 62,85 million, will be received by Icelandair in cash at year-end 2019. The outstanding 25%, USD 20.95 million, is expected to be paid in cash in year-end 2022. The cash

payments for Icelandair Hotels are added to the total other operating revenue in 2019 and 2022. The total forecasted other operating revenue is stated in figure 7.7.

Figure 7.7

Other operating revenue forecast, in thousand USD



Source: Icelandair annual report, own creation

Figure 7.8 shows the total operating revenue as forecasted for the period. We expect steady growth in transport revenue during the forecasted period. Due to reduced scope of the charter business, and sale of the hotel operations both aircraft and aircrew lease revenue and other operating revenues as a percentage of total revenue decreases

Figure 7.8

Total operating revenues forecast, in thousand USD

Source: Icelandair annual report, own creation

7.2.2 Operating expenses

Salaries and other personnel expenses

The salaries and other personnel expenses will be forecasted as an average per employee multiplied by the number of employees. Average salary per employee is calculated with equation 7.3:

$$\frac{Salaries\ and\ other\ personel\ expenses}{Full\ time\ equivalent\ employees} = Average\ salary\ per\ employee \qquad (7.3)$$

The number of full-time equivalent employees (FTE) of Icelandair and IGS is, because of their close relations to international transport, expected to grow at a constant rate growth relative to growth in ASK, based on historical data. Assumed employee growth per increase in ASK is calculated with equation 7.4.

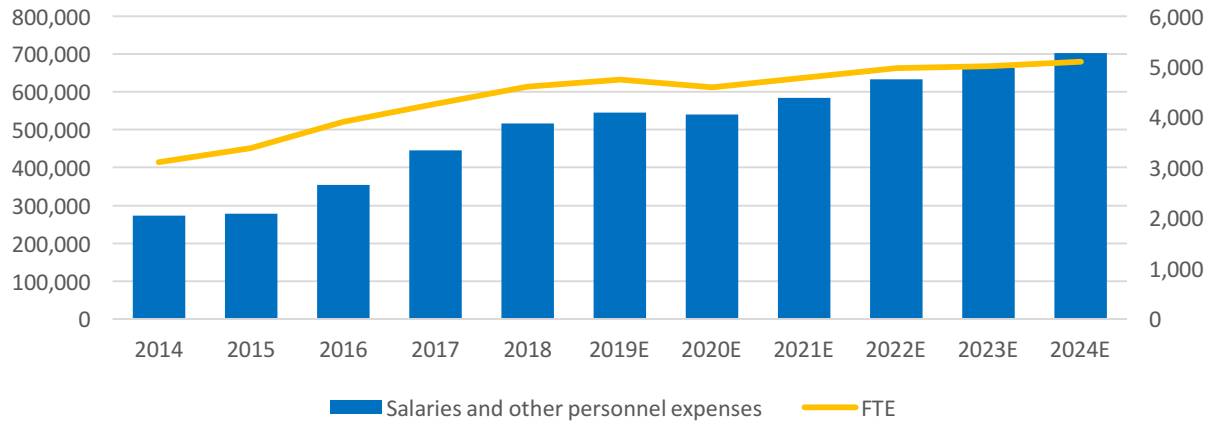
$$\frac{ASK}{\text{FTE}} = Average\ number\ of\ ASK\ per\ FTE \qquad (7.4)$$

In 2018, ASK grew by 1 million from the previous year. Meanwhile, the number of full-time equivalent employees of Icelandair and IGS grew by 338 during the same period. In the forecast, we use the average ASK per each FTE from 2014 to 2018 as a benchmark for growth in Icelandair and IGS employees. Because the other subsidiaries are not closely related to international transport, their employee count is presumed to remain the same throughout the forecast period, except for the Hotel business. The FTE employees associated with Icelandair Hotels is expected to have decreased by 75% at year-end 2020 and then fully divested in year-end 2022. As mentioned in the strategic analysis chapter, if part of the employees were to go on a strike to demand higher salaries or for other reasons, it could affect the overall operation of the airline. Such an event is impossible to forecast into the future, but the threat should be kept in mind while making the forecast. The forecast presumes that salaries will grow 2.5% on average from 2019-2020 and to minimize the risk of a strike we presume it to increase 4% after that.

The forecast presumes relatively stable growth in ASK in the forecast. The growth will hence result in more employees and higher salary cost in the forecasted period. The forecast is presented in figure 7.9.

Figure 7.9

Salaries and other personnel expenses, and Employee count forecast, in thousand USD



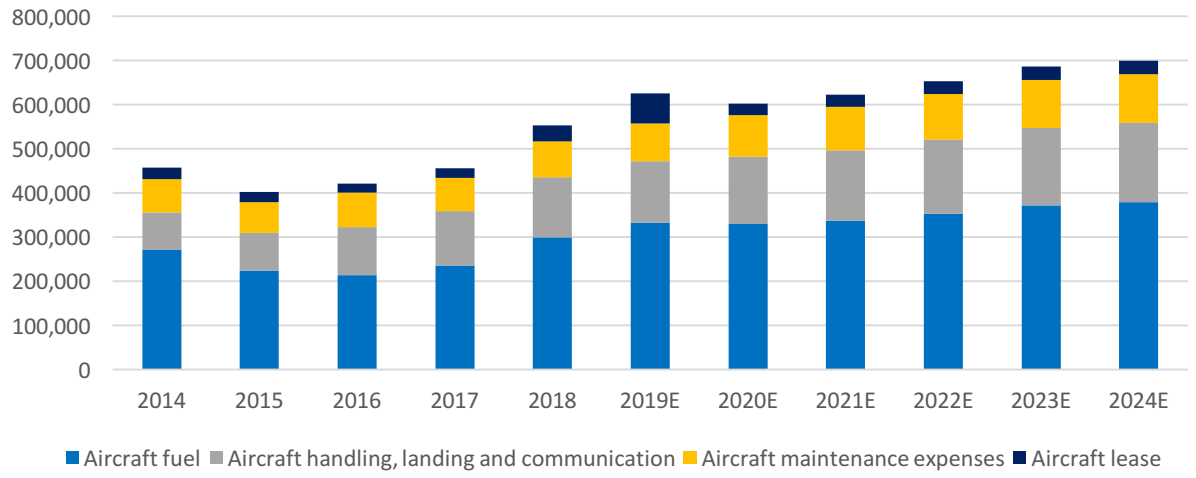
Source: Icelandair annual report, own creation

Aviation expenses

Aviation expenses include fuel costs, aircraft lease, aircraft handling, landing, and communications and maintenance. We presume the aviation expenses are to be highly correlated with ASK. All factors except, fuel costs and aircraft lease are held as a constant per ASK from 2019-2024. In figure 5.3, we show how the price of jet fuel and crude oil are correlated and how volatile they are over time. Further we show in figure 6.3 the development of two commodities, jet fuel prices and the ISK/USD exchange rate over the past few years. These price development of those commodities are likely to be extremely important for the short-term profitability of Icelandair in the future. Airlines can hedge away some of the risk related to these developments but not eliminate them completely. In the long-term perspective airlines can incorporate the developments into their pricing structure. Because the development of these commodities is extremely hard to predict, we forecast them at a constant rate throughout the period. We assume that the entrance of the MAX planes into service, in early 2020, will decrease the consumption of jet fuel per each ASK. Due to the MAX groundings, Icelandair has had to lease more aircrafts into their business. We expect that the lease cost in 2019 will be twice the average cost in 2014 – 2018. In 2020 we expect the MAX planes to enter full service and lease costs to return to a similar level as in 2016-2017. Further, we assume that jet fuel prices remain at current level during the forecasted period. The forecast for aviation expenses is presented in figure 7.10.

Figure 7.10

Total aviation expenses forecast, in thousand USD



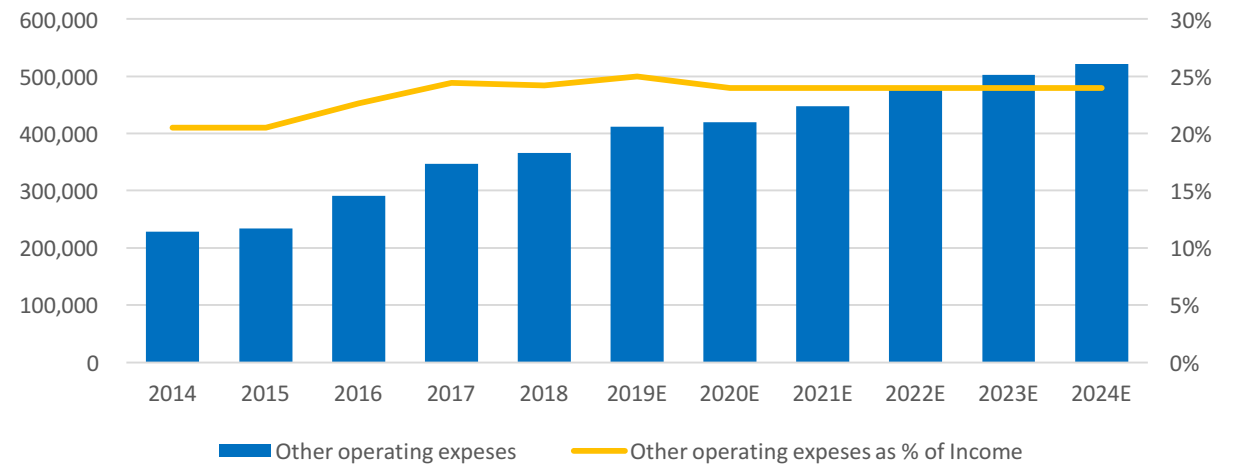
Source: Icelandair annual report, own creation

Other operating expenses

From 2014-2018 other operating expenses, amounted on average to 22.5% of total operating income. The trend has, however, been that the cost is increasing over time and is 24.2% in 2018. In 2019 we assume that other operating expenses amount to 25% of total operating income. The increase in other operating cost is a consequence of the MAX situation. Throughout the rest of the forecast, we assume that other operating expenses amount to a constant 24.5% of total operating income. The forecast for other operating expenses presented in figure 7.11.

Figure 7.11

Other operating expenses forecast, in thousand USD

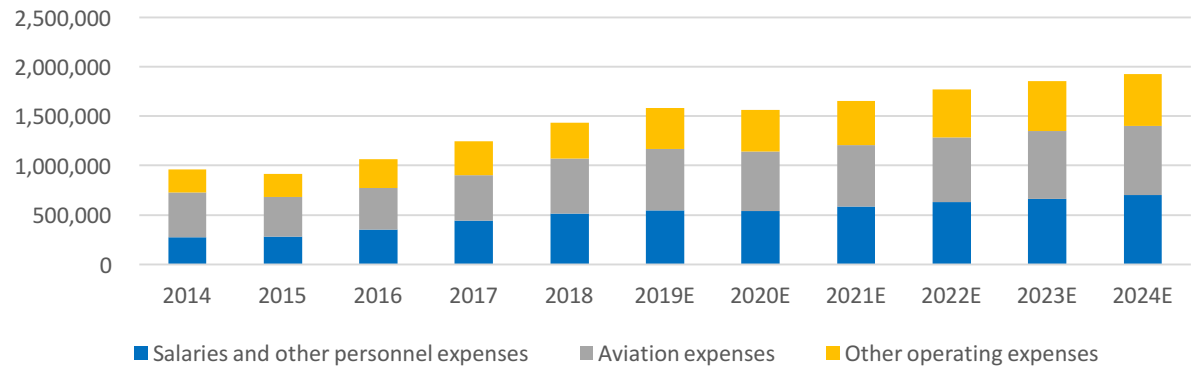


Source: Icelandair annual report, own creation

Figure 7.12 shows how the total operating expenses develop in both the historical and forecasted period.

Figure 7.12

Total operating expenses forecast, in thousand USD



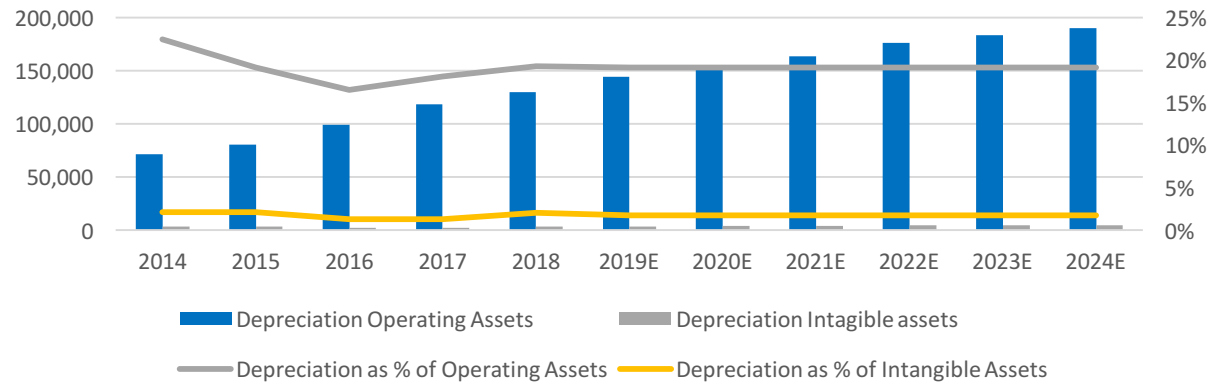
Source: Icelandair annual report, own creation

7.2.3 Depreciation and amortization

The historic depreciation and amortizations (D&A) of operating assets is 19.08% on average from 2014-2018. During the same period, the depreciation of intangible assets was 1.78%. We use the historical average throughout the forecast period. The forecast for D&A is presented in figure 7.13.

Figure 7.13

Depreciation & Amortizations forecast, in thousand USD



Source: Icelandair annual report, own creation

7.2.4 Tax rate

The tax rate on capital income and businesses is currently 20% in Iceland. We assume that no changes will be made on the tax system in Iceland in the forecasted period and assume a constant 20% corporate tax. Further, we assume that no special environmental taxes are laid on airlines operating in Iceland. It should, however, be considered as a possibility due to climate changes and plans to reduce CO2 emissions.

7.2.5 Interest rates

We will use the cost of debt derived in the following section. Icelandair has secured liabilities in USD, EUR, and ISK, and the interest rate is the weighted average of the interest rate of the interest-bearing debt. As section 8 explains in greater details, the weighted average of the interest rate paid is 3.55%.

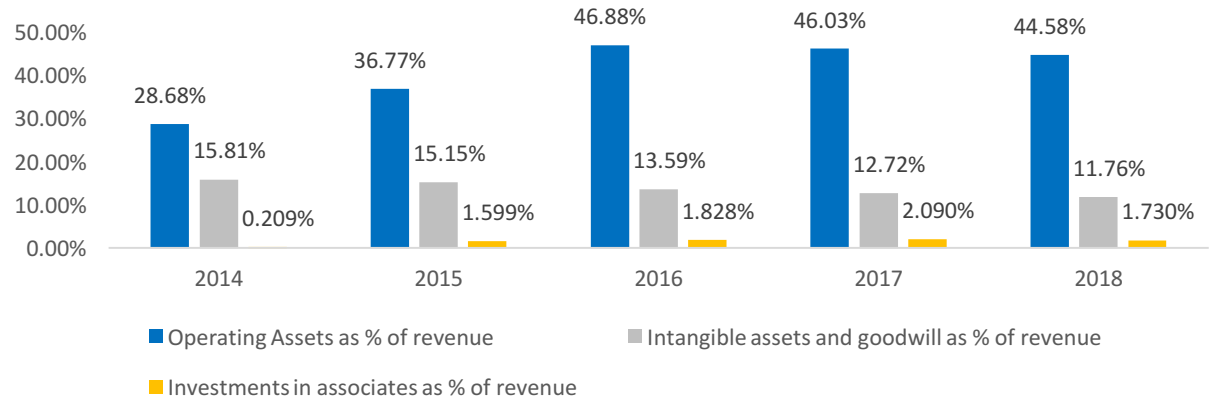
Balance sheet items

7.2.6 Intangible and tangible assets as % of revenue

Intangible and tangible assets (IT&T) are specified as total operating assets and, intangible assets and goodwill (IT) plus investments in associates (IA). During the historical period, 2014-2016 operating assets as % of revenue increased rapidly. We, therefore, assume that the historical average from 2016-2018 is a better benchmark for the forecast. The historical development of IT&T assets as a % of revenue is presented in figure 7.14.

Figure 7.14

IT & T assets as % of revenue from 2014-2018

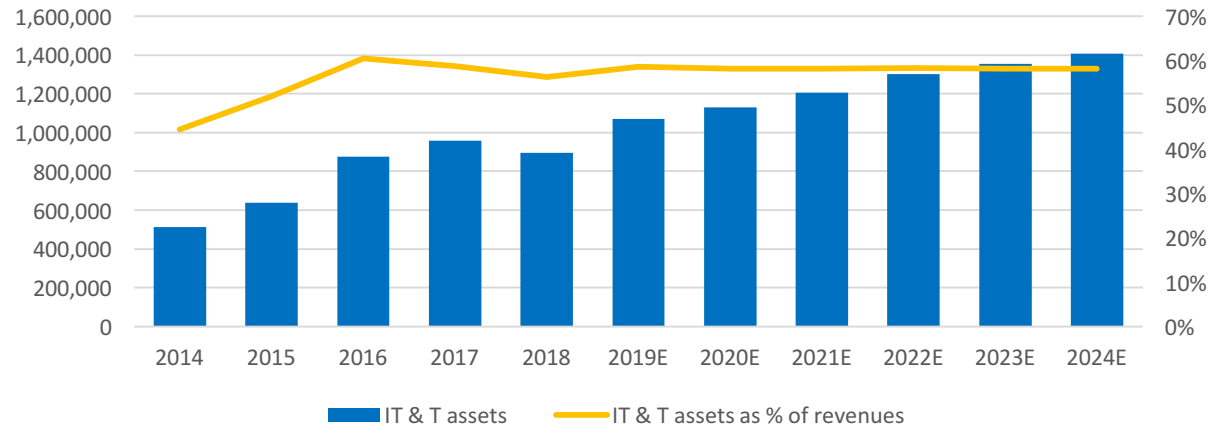


Source: Icelandair annual report, own creation

The historical average of operating assets, IT & IA assets as % of revenue used in the forecast are 45.8%, 1.7%, and 1.9%. The development of IT & T assets in the forecast is presented in figure 7.15.

Figure 7.15

Total intangible and tangible assets forecasted, in thousand USD



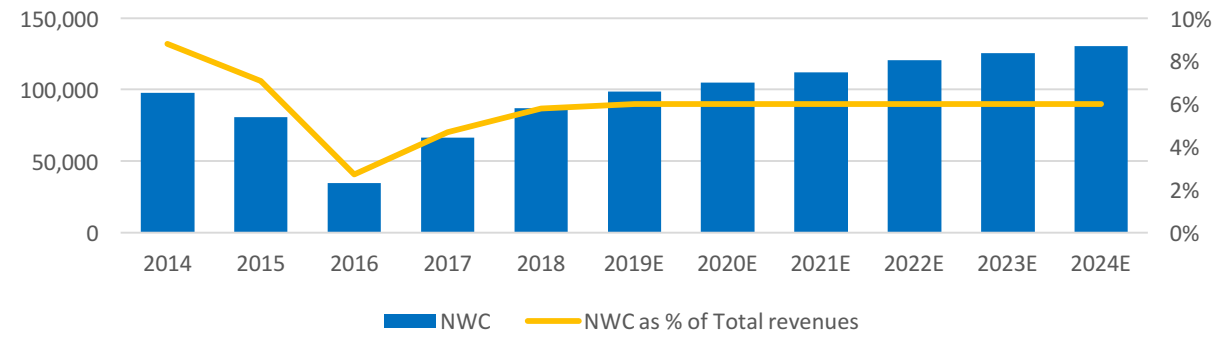
Source: Icelandair annual report, own creation

7.2.7 Change in Net Working Capital as % of revenue

We estimate the change in net working capital (NWC) as current assets minus current liabilities. Based on a historical average from 2014-2018, the NWC is presumed to be -6% of total operating revenue. It is quite common for airlines to operate with a negative NWC due to the nature of their business model. It is mainly because their customers most often pay for airfares well in advance. These prepayments are listed as differed income in current liabilities. Therefore, an airline with a lot of prepaid flights can have a significant negative NWC. The forecasted NWC is stated in figure 7.16.

Figure 7.16

NWC forecast shown in absolute numbers, in thousand USD



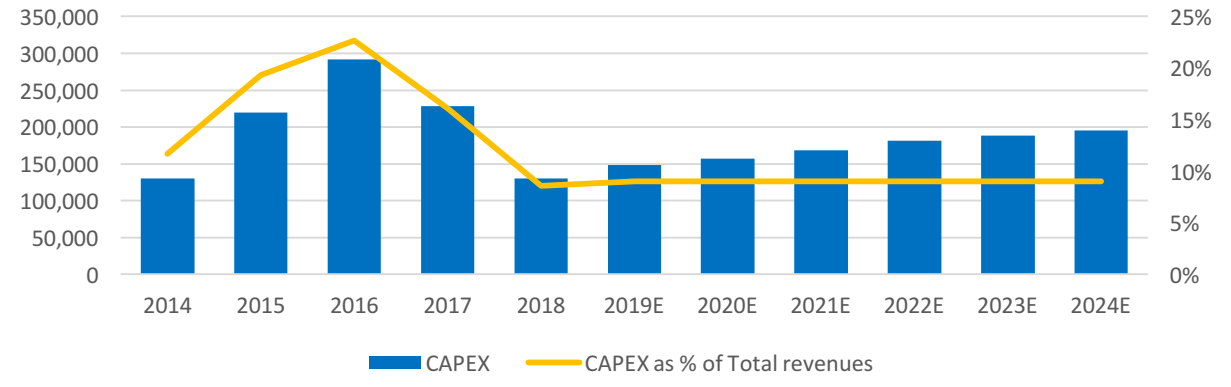
Source: Icelandair annual report, own creation

7.2.8 Capital expenditure

Icelandair invested heavily in their operations in 2015, 2016, and 2017 during the tourism growth. The average growth in ASK during that period was 16% and the average capital expenditure as a percentage of revenues during the same period was 19%. As discussed previously in this section, we do not expect as much growth in ASK over the forecasting period and therefore expect the capital expenditure to be at a similar level to 2018 where it accounts for about 9% of total operating revenues. Figure 7.17 shows the expected development of Icelandair's capital expenditure. This is in line with the IT&T asset forecasted previously.

Figure 7.17

Capital expenditure forecast shown in absolute numbers, in thousand USD



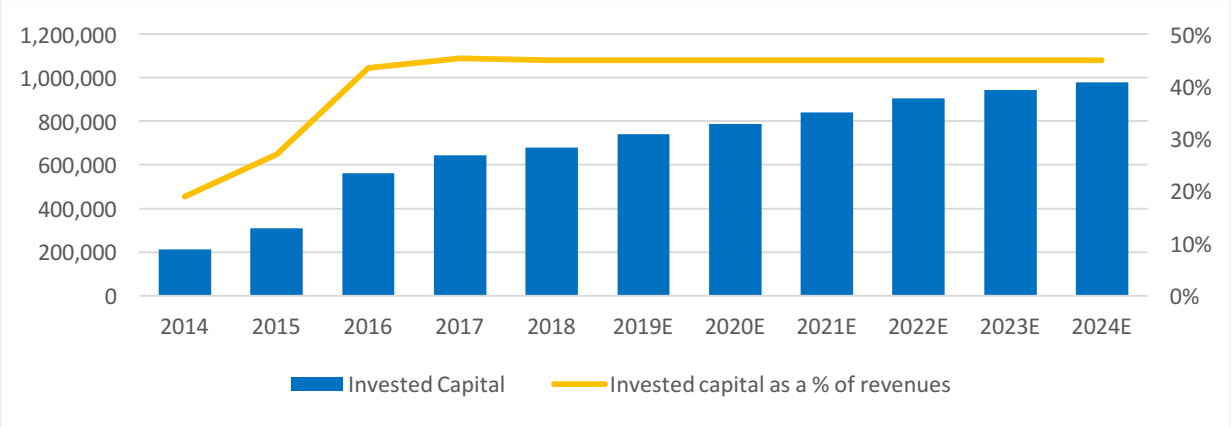
Source: Icelandair annual report, own creation

7.2.9 Invested capital and Net Interest-bearing debt

We calculate Invested capital or net operating assets as operating assets minus operating liabilities. We then calculate net interest-bearing debt (NIBD) as a % of the invested capital. The historical development of NIBD shows that the Icelandair had gone from negative NIBD in 2014 to positive in 2018. The development means that Icelandair has been increasing its interest-bearing debts over the period. In 2018 NIBD amounted to 30.6% of invested capital. We estimate that to be able to keep up with the growth, NIBD will increase in a fixed proportion to IC. We estimate that NIBD will amount 30% of the total invested capital. The expected development of invested capital and NIBD is presented in figure 7.18 and 7.19.

Figure 7.18

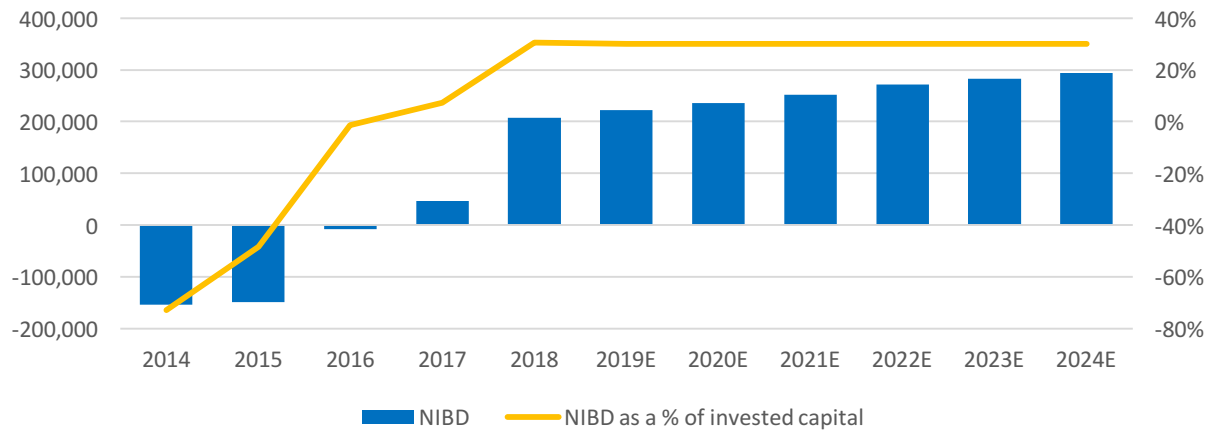
Invested capital forecast in thousand USD



Source: Icelandair annual report, own creation

Figure 7.19

Net interest-bearing debt forecast, in thousand USD



Source: Icelandair annual report, own creation

8. Valuation

8.1 Discounted cash flow

Discounted cash flow (DCF) models are the most commonly used tools in practice to estimate the present value of a company. According to the DCF model, the stream of a firm´s future free cash flow determines the present value of the company. The DCF model can be used to estimate the present value of the entire firm, which is known as the enterprise value or, the present value of the equity held by the shareholders of the firm, (Petersen et al., 2017). In this section, we use the DCF model to estimate the enterprise value and deduct the net interest-bearing debt (NIBD) from the enterprise value to find the market value of equity.

When estimating the enterprise value, the forecasted free cash flow to the firm is discounted with the weighted average cost of capital (WACC). Equation 8.1 shows how we use the DCF model to estimate the enterprise value.

$$Enterprise\ value = \sum_{t=1}^{n} \frac{FCFF_t}{(1+WACC)^t} + \frac{FCFF_{n+1}}{WACC - g} * \frac{1}{(1+WACC)^n} \qquad (8.1)$$

As can be seen from equation 8.1, a firm's enterprise value is based solely on the forecasted free cash flow, the estimated WACC, and the growth (g) estimation in the terminal period. Hence, the market value of a firm will be positively affected by higher FCFF and growth rate, but negatively affected by higher WACC.

8.1.1 Weighted average cost of capital

To calculate the enterprise value with equation 8.2, we need to estimate Icelandair's weighted average cost of capital (WACC). As the name indicates, the WACC is a weighted average of the required return for each type of investor. As equation 8.2 shows, WACC is composed of the weighted average of the required return on the company's equity and required return on the company's debt. Since interest payments are deductible from tax, the cost of debt is positively related to the tax rate (Petersen et al., 2017).

$$WACC = \frac{Equity}{NIBD + Equity} * r_e + \frac{NIBD}{NIBD + Equity} * r_d * (1 - tax) \qquad (8.2)$$

Due to liquidation preference, the required return on debt is generally lower than the required return on equity. Therefore, levered firms have lower WACC. Hence, the WACC is heavily dependent on the capital structure. Icelandair's capital structure has varied a lot during the five-year historical period. Table 8.1 shows how Icelandair's capital structure has evolved and how we estimate the future capital structure. Further calculations on the capital structure are in the appendix.

Table 8.1

Capital structure 2014-2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Equity/EV	173%	148%	101%	93%	71%	70%	70%	70%	70%	70%	70%
Debt/EV	-73%	-48%	-1%	7%	29%	30%	30%	30%	30%	30%	30%

Source: Icelandair annual report, own creation

As we see from the table, NIBD is negative in 2014, 2015 and 2016. That is due to the excess cash held by Icelandair is higher than the total interest-bearing debt. However, during the period, Icelandair takes on more debt. As reported in the Q2 statement in 2019, the capital structure is around 70% equity and 30% debt. In our DCF estimate, we will use the capital structure outlined in table 8.1. Although the capital structure remains rather stable during the forecasted period, we take the slight increase in debt as a percentage of enterprise value into consideration when WACC is calculated for each year.

Required return on equity

To make a fair estimation on equity holders required rate of return, we use the capital asset pricing model (CAPM). In the CAPM model, the underlying assumption is that by holding a security or a portfolio of securities, investors need to be compensated for the risk they bear. The systematic risk of a specific security or a portfolio of securities that cannot be diversified away is determined by its beta (β). The CAPM formula is described in equation 8.3, where r_e denotes the required return on equity, r_f denotes the risk-free rate of return and r_m denotes the return on the market portfolio.

$$r_e = r_f - \beta(r_m - r_f) \tag{8.3}$$

To find the required return on equity, we need an estimation of the risk-free rate, the market portfolio, and beta.

The risk-free rate is an estimation of how much return an investor can gain without taking any risk. As the CAPM formula indicates, an investment in a security or a portfolio of securities with beta equal to zero would be a risk-free investment. In practice, it is problematic and expensive to create a zero-beta portfolio, and practitioners usually use government bonds as a proxy for the risk-free interest rate. Government bonds are in general fully backed by central banks. The yield of government bonds is generally dependent on the time to maturity. Ideally, future cash flow should be discounted using a bond with the same time to maturity. For simplicity, most practitioners do not match each cash flow to a bond with the same maturity. Instead they choose a single bond with a maturity that best matches the entire cash flow being valued. Both Koller et al. (2010) and Petersen et al. (2017) claim that for valuation purposes a government bond with 10-years to maturity is the best proxy for the risk-free rate. Although bonds with 30-years to maturity might match the cash flow in a better way, their illiquidity affects their current value and therefore the yield. For valuation, the government bond used as a proxy for the risk-free rate should always be denominated in the same currency as the cash flow the firm generates. By doing so, inflation will be modeled consistently between the cash flow and the discount rate (Koller et al., 2010). Since Icelandair reports in USD and their largest source of income is in USD, we use a 10-year US Treasury government bond as a proxy for the risk-free rate. We use a yearly average of a US Treasury index, known as USGG10YR. According to the index, the average yield on a US Treasury government bond was 2.91% in 2018. Table 8.2 shows how the yield has evolved.

Table 8.2

US Treasury 10-year index

Year	***2014***	***2015***	***2016***	***2017***	***2018***
USGG10YR Index	2,53%	2,13%	1,84%	2,33%	2,91%

Source: Bloomberg, own creation

The market risk premium is the difference between the expected return on the market portfolio and our risk-free proxy. Theory tells us that investors are risk-averse and therefore demand a premium for holding more risk than the risk-free asset. How to estimate the market's risk premium has been one of the most debated issues in finance among practitioners. The most commonly used method is to use historical returns as the proxy for the market portfolio (Koller et al., 2010). Table 8.3 shows the yearly return on different market indices.

Table 8.3

Return on the market portfolio

Index	*Market*	*Period*	*Average yearly return*
S&P500	USA	1927-2018	7.4%
MSCI World	World	1969-2018	7.7%
NASDAQ OMXI8	Iceland	2009-2018	8.9%
NASDAQ OMXN40	Nordics	2007-2018	4.4%

Source: Bloomberg, own creation

The S&P500 Index is a value-weighted index and measures the returns of the 500 largest publicly listed companies in the US. The MSCI World Index is also a value-weighted index composed of large stocks from 23 developed countries, including the US. The OMXI8 index consists of the eight largest and most liquid companies listed on the Icelandic stock exchange, and the OMXN40 index consists of the 40 largest and most actively traded stocks on the Nordic exchanges. Table 8.3 shows the average yearly return on those different indices, explaining the returns in different markets. As both the theory and CAPM explains, the market portfolio should equal the value-weighted portfolio of all assets worldwide. In reality, such a portfolio does not exist, but the MSCI world index is what comes closest to capturing the true market portfolio. Hence, we use the average yearly return from 1969-2018 of the index as our proxy for the market return. The MSCI index captures similar returns to the S&P500 index, and the correlation of the two from 1969-2018 is 0.88. However, the main reason for choosing the MSCI world index is that it captures 1,651 large and mid-cap securities across 23 developed countries. It includes more securities and covers more geographically than the S&P 500 index. Therefore, it comes closer to represent the true market portfolio.

As equation 8.3 shows, the expected return on equity is driven by the stock's beta (β). Beta is the measure of how the stock and the market portfolio move together. According to CAPM, the market portfolio has a beta of 1.0. Therefore, security with beta larger than one has more volatile expected return than the market portfolio and security with beta smaller than one has a less volatile expected return. Beta cannot be observed directly and therefore needs to be estimated. There are two ways we can estimate the beta, that is the firm-specific beta and the industry-specific beta. First, we estimate Icelandair's firm-specific beta by regressing daily stock returns of Icelandair over a five-year period against the OMXI8 index. We get a beta coefficient of 1.57. This raw beta coefficient may not be the best estimate of the true beta. Researchers have shown that beta has a men-reversion.

Therefore, we use equation 8.4 that incorporates mean-reversion to calculate the adjusted beta. By adjusting the beta, extreme observations towards the overall average are reduced (Koller et al., 2010).

$$\beta_{adjusted} = \frac{1}{3} + \frac{2}{3}\beta_{raw} \quad (8.3)$$

In table 8.4, we compare our results to the beta coefficient given by both the Thompson One and Bloomberg database.

Table 8.4

Icelandair beta

Company	*Country*	*Source*	*Period*	*β*	*Adjusted β*
Icelandair	Iceland	Own creation	5 Years	1,57	1,38
Icelandair	Iceland	Thompson One	5 Years	1,58	1,39
Icelandair	Iceland	Bloomberg	5 Years	1,72	1,48

Source: Bloomberg, Thompson One, Own creation

To estimate the industry beta, we use the ten peers, which we have used for benchmarking in previous sections. Since companies operating within the same industry face the same risk and similar operating environment, their beta should be similar. However, different companies from different countries have both different capital structure and are subject to different tax policies. Beta is a function of both operating and financial risks a company takes. To make an accurate estimation of the industry beta, we offset the effect of both leverage and different tax rates by un-levering the beta estimate based on each peer company capital structure and tax rate. The beta is then re-levered with the capital structure and tax rate of Icelandair (Koller et al., 2010). Table 8.5 shows the beta estimates for the peer group and the median of the re-levered adjusted beta that we use as the industry beta.

Table 8.5

Industry beta

Company	*Market proxy*	*Period*	*β*	*Un-levered adj. β*	*Re-levered adj β*
Air Canada	S&P/TSX Composite	5 Years	0,94	0,46	0,80
Air France	CAC 40 Index	5 Years	0,88	0,73	1,28
American Airlines	S&P 500	5 Years	1,45	0,99	1,74
Delta Airlines	S&P 500	5 Years	1,12	0,37	0,65
EasyJet	FTSE 100	5 Years	0,26	0,16	0,29
FinnAir	OMXH CAP	5 Years	0,71	0,58	1,02
Lufthansa	DAX	5 Years	0,78	0,53	0,93
Norwegian	OBX STOCK	5 Years	0,60	0,41	0,72
SAS	OMX Stockholm 30	5 Years	0,64	0,55	0,96
United Airlines	S&P 500	5 Years	1,10	0,56	0,97
		Mean	0,85	0,53	**0,94**
		Median	0,83	0,54	**0,94**

Source: Bloomberg, Own creation

Since Icelandair has experienced some abnormal events over the last year, we believe that the firm-specific beta might give an inaccurate estimate of the true beta. News about Icelandair's acquisition of WOW air which was then canceled a few months later, the grounding of the MAX aircrafts and finally the bankruptcy of WOW air has led to increased and abnormal volatility on Icelandair's stock price over the past year. Therefore, we believe that the industry beta gives a better estimation of the true value of beta and will use a beta of 0.94 in our analysis.

By applying the estimation of the risk-free rate, the return on the market portfolio, and the beta we get a required return on equity of 7.41%. Table 8.6 shows the cost of equity calculation.

Table 8.6

Required return on equity

Risk-free rate of return	*2,9%*
Return on the market portfolio	7,7%
Beta	0,94
Required return on Equity	**7,41%**

Source: Bloomberg, Own creation

Cost of debt

Icelandair holds interest-bearing debt in USD, EUR, and ISK. The interest rates on the subsequent debt is given in the financial statements published quarterly by Icelandair. To get the best current estimate of the cost of debt, we use the latest statement published by Icelandair, which is the Q2 statement in 2019. The largest part of the interest-bearing debt is in USD, then EUR and ISK respectively. We calculate the cost of debt as the weighted interest rate of the three different interest rates. Table 8.7 shows the cost of debt, both pre- and post-tax. As discussed in previous sections there is a tax advantage of holding debt.

Table 8.7

Cost of debt

Currency	***Interest rate***	***Percentage of total NIBD***
USD	4,40%	54%
EUR	1,20%	30%
ISK	5,10%	15%
Pre-tax cost of debt	**3,55%**	
Tax rate	20%	
After-tax cost of debt	**2,84%**	

Source: Icelandair Q2 report 2019, Own creation

Weighted average cost of capital calculation

WACC is heavily influenced by Icelandair's capital structure. In previous annual statements, Icelandair has not expressed any target in regards to capital structure. Over the historical period, the capital structure has varied a lot with Icelandair taking on more debt in recent years. However, as discussed previously, the forecast assumes that Icelandair will be approximately 70% equity-financed during the forecasted period. Table 8.8 shows how the WACC is affected by the capital structure during the period. We assume that Icelandair will remain 69.9% equity-financed in the terminal period.

Table 8.8

Weighted average cost of capital

Return on Equity	*7,41%*					
Return on Debt	3,55%					
Tax rate	20,00%					
	2019	***2020***	***2021***	***2022***	***2023***	***2024***
Equity/Equity+NIBD	70,1%	70,0%	70,1%	69,5%	69,7%	69,9%
NIBD/Equity+NIBD	29,9%	30,0%	29,9%	30,5%	30,3%	30,1%
WACC	**6,04%**	**6,04%**	**6,04%**	**6,02%**	**6,03%**	**6,03%**

Source: Own creation

8.1.2 Discounted cash flow calculation

Table 8.9

Discounted cash flow valuation, numbers are in thousand USD

	2019	***2020***	***2021***	***2022***	***2023***	***2024***
FCFF	-93.977	17.888	28.604	40.682	37.787	39.087
WACC	6,04%	6,04%	6,04%	6,02%	6,03%	6,03%
Terminal Growth						1.5%
Discount factor	0,98	0,92	0,87	0,82	0,78	0,73
PV of FCFF	-92.155	16.540	24.934	33.455	29.287	28.545
PV of FCF forecasted period	12.137					
PV of the terminal period	630.810					
Enterprise value	642.948					
Net interest bearing debt	222.350					
Equity Value	420.598					
Shares outstanding	5.437.661					
Price per share (USD)	0,0773					
ISK/USD	126,04					
Price per share (ISK)	**9,75**					

Source: Own creation

The DCF model generates an enterprise value of 643 million USD for Icelandair based on our forecasted free cash flow to the firm. We estimate the NIBD to be 222 million, according to the forecast in the previous section. By subtracting the NIBD from the enterprise value, we obtain the estimated market value of equity. The equity valuation leads to a share price of 9.75 ISK per share, which is 33.5% higher than the current market value of 7.30 as of September 1st 2019. Hence,

according to our valuation, Icelandair is significantly undervalued by the market. There are certain factors that cause uncertainty around Icelandair's operations. The DCF model is based on theoretical framework and might fail to take those uncertainties into account. Factors such as the uncertainty that surrounds the MAX aircrafts and the possible early entrance of an LCC to the Icelandic market might cause the market to increase their required return on investment in Icelandair, causing a lower stock price. As table 8.9 shows, the primary determinant of the equity value is in the present value of the free cash flow in the terminal period. If we increase the required return on equity by 1%, to 8.4% the estimated stock price changes to 7.30, which is the same as the market value of Icelandair´s stock as of September 1st 2019.

The present value of the free cash flow in the terminal period is highly dependent on both the expected growth of the free cash flow and the WACC. Table 8.10 shows how sensitive the estimated stock price to changes of WACC and growth rate in the terminal period.

Table 8.10

Sensitivity analysis

		Growth rate in the terminal period						
		0,0%	0,5%	1,0%	1,5%	2,0%	2,5%	3,0%
WACC	4,5%	11,05	13,04	15,60	19,01	23,78	30,95	42,89
	5,0%	9,10	10,65	12,59	15,08	18,41	23,06	30,05
	5,5%	7,51	8,75	10,26	12,15	14,58	17,83	22,37
	6,03%	6,11	7,11	8,30	9,75	11,56	13,89	16,98
	6,5%	5,09	5,92	6,90	8,08	9,52	11,32	13,63
	7,0%	4,15	4,84	5,65	6,61	7,76	9,16	10,92
	7,5%	3,34	3,93	4,61	5,39	6,33	7,45	8,82

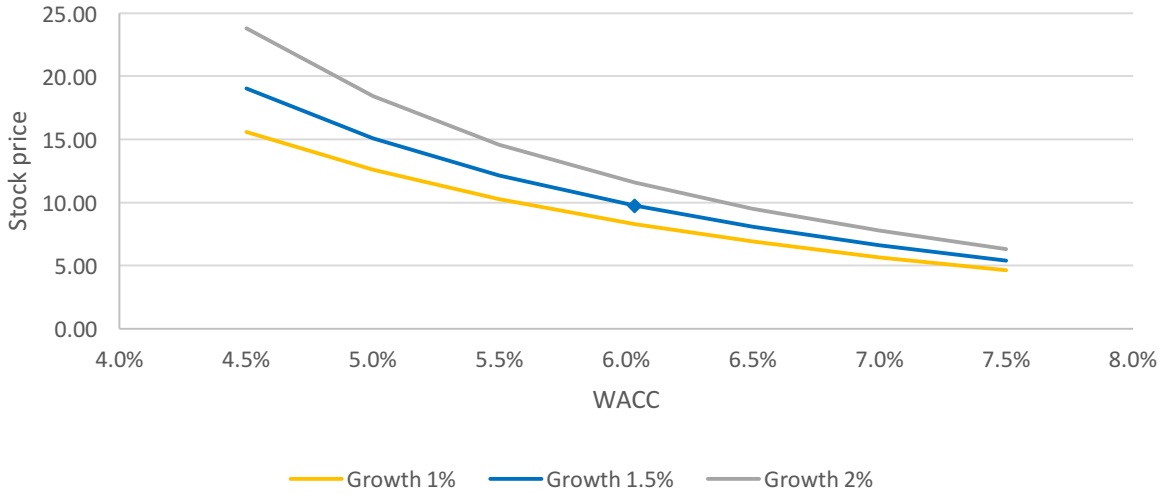
Source: Own creation

The free cash flow to the firm in the terminal value accounts for approximately 98% of the enterprise value. Therefore, both the WACC estimate and the terminal growth estimate influence the stock price significantly.

Figure 8.1 further shows sensitive the stock price is to the two previously mentioned factors.

Figure 8.1

Sensitivity analysis



Source: Own creation

8.2 Relative valuation - Multiples

Despite being the most accurate and flexible method for company valuation, the discounted cash flow method is only as accurate as the forecast it relies on. To test the plausibility of our DCF valuation, we apply the relative multiple valuation. The multiple approach will give an estimate of Icelandair's relative value based on the relative pricing of our peer group earnings. We assume that all peer stock is traded on an efficient market, at fair value and that the accounting standards are the same. Due to the similarities of the company as discussed in section 6, Icelandair's relative value should be in within the range of the peer group relative value. By assuming that the peer group´s stock is traded on efficient markets at fair value, we can compare the relative value of Icelandair to the DCF valuation, (Koller et al., 2010).

There are pros and cons of using multiples for valuation purposes that need to be considered during the analysis. Multiples are based on current market information and reflect the market's expectations for essential parameters, such as risk and growth. They are simple, easy to measure and calculations are straight forward compared to other valuation methods. However, a valuation based on multiples critically relies on the assumption that the comparable firms are truly comparable and that they share the same economic characteristics and outlook. Valuation based on multiples must be treated conservatively, as those truly comparable are difficult to find. The valuation is in most cases based on companies that are not identical and company-specific differences, depending on the multiple being used can distort the valuation, (Petersen et al., 2017).

In this section, we use both enterprise-based multiples and equity-based multiples, which are the most commonly used multiples. Enterprise based multiples such as revenue, EBITDA, and EBIT take into account cash flow that both creditors and equity holders will claim and therefore represent the value of the entire company. The net equity/net income (price-earnings) multiple analyzed in this section estimates the value created for shareholders and thus estimates the equity value of the company. The factors that influence the enterprise value-based multiples are highlighted in table 8.11, and table 8.12 shows the factors that influence the price-earnings multiple.

Table 8.11

Enterprise value-based multiples

Multiple	***Factors***					
EV/REVENUE	*ROIC*	*WACC*	*g*	*Tax rate*	*Depreciation*	*EBITDA margin*
EV/EBITDA	*ROIC*	*WACC*	*g*	*Tax rate*	*Depreciation*	
EV/EBIT	*ROIC*	*WACC*	*g*	*Tax rate*		

Source: Icelandair Q2 report 2019, Own creation

Table 8.12

Equity-based multiples

Multiple	**Factors**		
Equity/Net income	r_e	*ROE*	*g*

Source: Icelandair Q2 report 2019, Own creation

As table 8.11 shows, all of the enterprise value-based multiples are influenced by the profitability of operations, cost of capital, expected growth rate, and tax rate. Furthermore, the EV/EBITDA multiple is also influenced by the depreciation rate, and the EV/revenue multiple is dependent on the depreciation rate, and in addition to that, the EBITDA margin. The price-earnings equity multiple is based on the required return on equity, the return on equity and the growth rate. It is unlikely that many companies that operate in the same industry share the same values in all those factors. However, differences in those factors can explain why companies working in the same industry trade at a higher or lower multiple compared to their peers (Petersen et al., 2017). Further explanation on how the multiples are affected by the factors and how the multiples are derived from the discounted cash flow model is in the appendix.

Due to the different factors affecting the multiples, FinnAir, and SAS have been chosen as the most comparable peers. Both have similar capital structure to Icelandair, and their WACC should, therefore, be similar. The ROIC is also on at a similar level during the historical period. We will derive Icelandair's relative valuation from the range of FinnAir and SAS multiples. This method is known as the football field valuation (Rosenbaum & Pearl, 2013).

When calculating the multiples, we use a forward-looking approach. Forward-looking multiples are consistent with the core principle of valuation that the value of a company equals the present value of its future cash flow. Empirical studies have shown that using forward-looking multiples will provide a superior and more accurate valuation. To build an optimal forward-looking

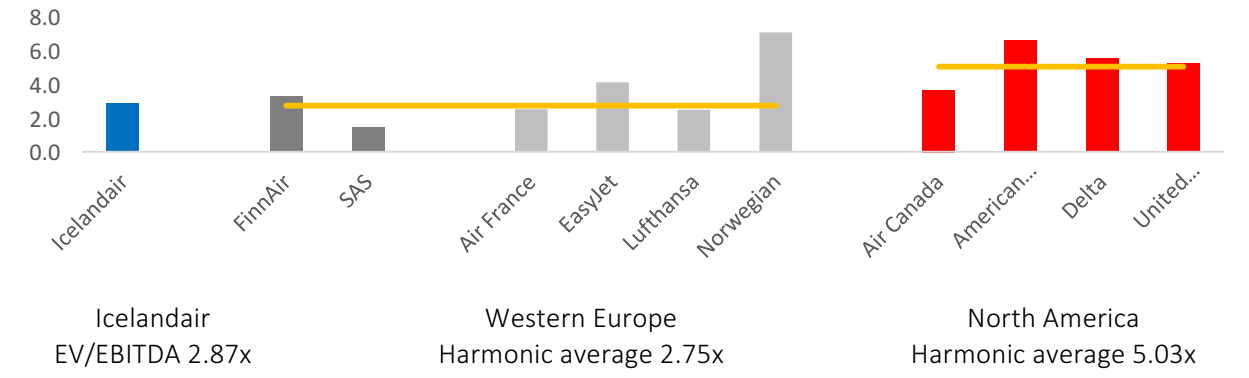
approach, multiple should represent the long-term prospect of the industry. As the airline industry is in stable growth and profitability, we will use the 2020 full-year estimates, (Koller et al., 2010). For the 2020 full year expected revenue, EBITDA, EBIT, and net earnings we use forecast provided by Bloomberg for the peer companies but the forecast derived in the previous section for Icelandair. The reason for using 2020 full-year estimates instead of 2019 is due to the abnormal conditions affecting Icelandair during 2019. That is the grounding of the MAX aircrafts, the sale of the hotel operations among other factors previously discussed. When interpreting the multiples, we will use a harmonic average instead of the arithmetic average which we have used in our analysis so far. The reason for applying the harmonic mean is to reduce the impact of extreme multiples. Previous research has shown that the harmonic average provides more accurate valuation estimates than multiples based on arithmetic average, median, or value-weighted average (Petersen et al., 2017). The harmonic average is calculated with equation 8.4:

$$Harmonic\ average = \frac{n}{\sum_{i=1}^{n} \frac{1}{multiple_i}} \tag{8.4}$$

8.2.1 EV/EBITDA multiple

Figure 8.2

EV/EBITDA multiples



Source: Bloomberg, Own creation

The EV/EBITDA multiple is the most commonly used multiple in most industry, as table 8.11 shows it is independent of depreciation, and the tax rate, (Rosenbaum & Pearl, 2013). Figure 8.1 shows the EV/EBITDA multiple of all ten peer companies. Companies operating in North America trade on a higher EV/EBITDA multiple compared to their Western European counterparts. As

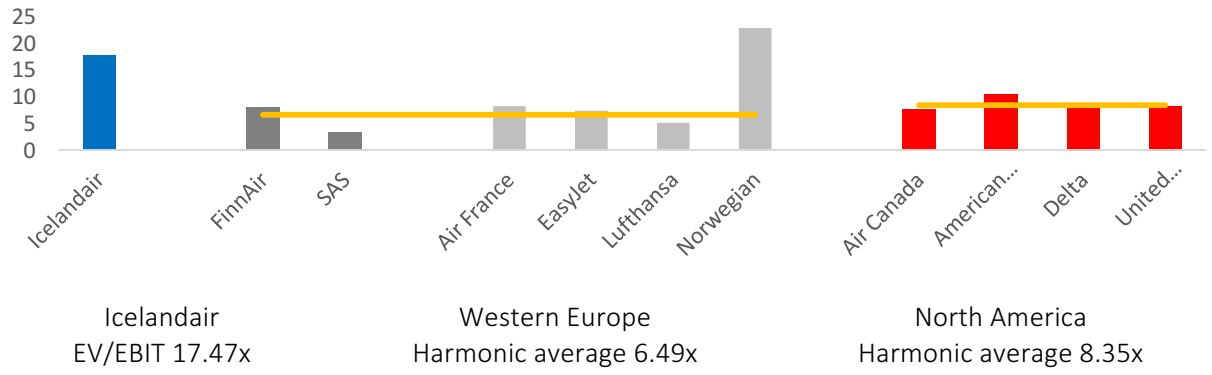
discussed in section 6, North American peers have been able to deliver better operating results. Both their ROIC and EBITDA margin is substantially higher than for the European firms. Therefore, they trade at a higher forecasted EV/EBITDA multiple.

Despite the bad operating results in 2017 and 2018, Icelandair is trading at an EV/EBITDA multiple close to the harmonic average of the European benchmark. As discussed in the previous section, we expect prices to increase as a result of WOW air's bankruptcy and Icelandair to increase their ASK during both 2019 and 2020. Those changes increase the EBITDA multiple estimate. A low EV/EBITDA multiple does not necessarily indicate that a company's relative value is low. Companies operating in capital intensive industries tend to have a low EV/EBITDA multiple since the level of depreciation is high. Therefore, we analyze the EV/EBIT multiple in the following section to compare with the EV/EBITDA results.

8.2.2 EV/EBIT multiple

Figure 8.3

EV/EBIT multiples



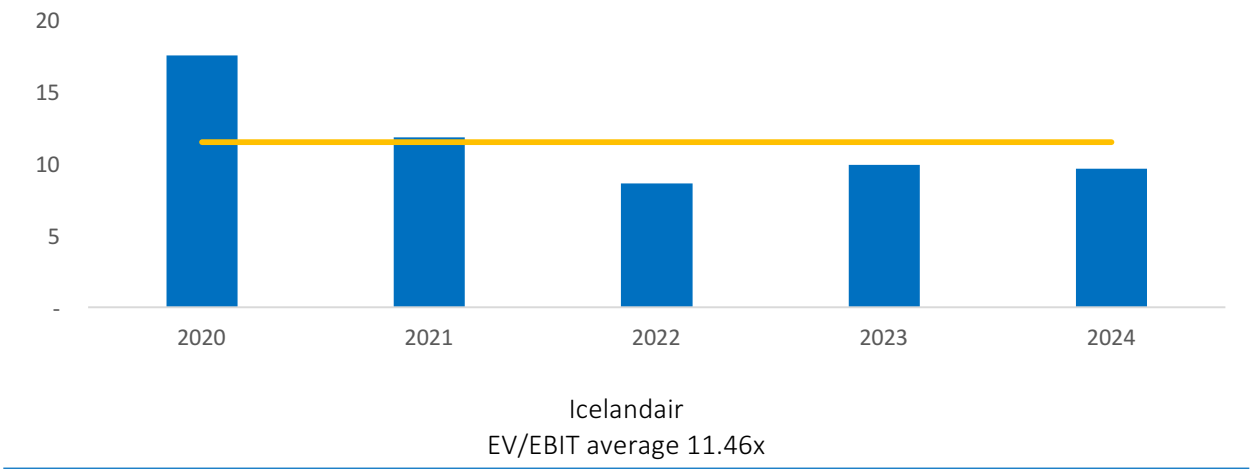
Source: Bloomberg, Own creation

For the EV/EBIT multiple, we observe a similar trend for our two peer groups, with the North American based group trading at higher multiple. The relative difference is though smaller between the two groups. Icelandair is, however, trading at a significantly higher multiple compared to both peer groups. The only difference between the EV/EBITDA and EV/EBIT multiple is the effect of depreciation and amortization. For Icelandair, depreciation, and amortization accounts for 84% of EBITDA in 2020. This high percentage explains the spike from the EBITDA to the EBIT multiple. The depreciation as a percentage of EBITDA is significantly lower for the European and American

firms, 58% and 38% respectively, which explains the decreased gap mentioned earlier. From the EV/EBIT multiple, we can draw the conclusion that Icelandair is currently trading at a high price compared to its peers, suggesting that it is overvalued. However, due to the difficult conditions in the external environment during the last two years, Icelandair's EBIT has decreased significantly as we observed in the EBIT margin analysis. We expect the EBIT to increase in both 2021 and 2022 and the depreciation to go below 80% of EBITDA for 2021 and onwards. Hence, the EV/EBIT multiple for 2020 might be skewed due to the difficulties in 2017, 2018 and 2019 and not reflecting the fair relative value of Icelandair.

Figure 8.4

EV/EBIT, Icelandair 2020-2024



Source: Own creation

Figure 8.3 shows the future looking EV/EBIT multiple for Icelandair from 2020-2024. The EBIT numbers are derived from the forecast discussed in the previous section. We observe a significant decrease between 2020 and 2021 with the multiple decreasing from 17.5x to 11.5x. We expect the EV/EBIT multiple decreases even further and to stabilize around 10x in 2023 and onwards. This confirms our suggestions that the bad operating results in previous years are affecting the EV/EBITDA multiple. Despite the decrease, Icelandair trades at a higher EV/EBIT multiple than the benchmarking group.

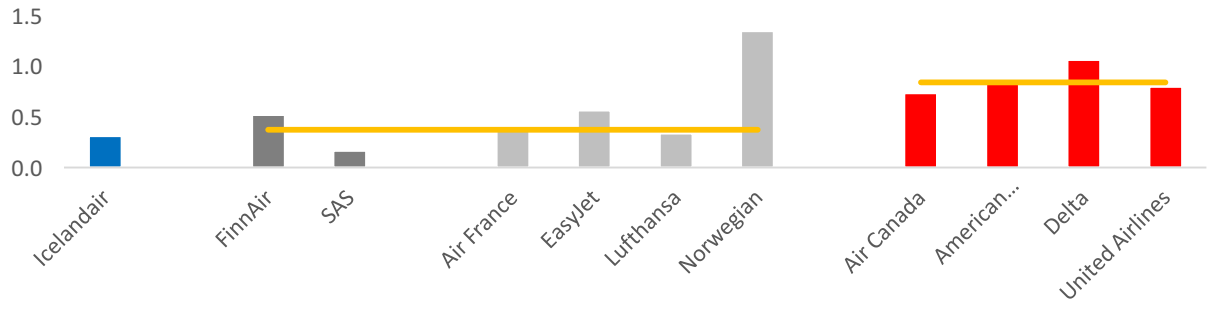
The aviation industry is an asset driven business, and profitability depends heavily on how those assets are deployed. We observe from this multiple that Icelandair has not been able to operate

their assets as efficiently as their competitors, which may be the effects of the grounding of the MAX aircrafts in 2019.

8.2.3 EV/Revenue

Figure 8.5

EV/Revenue multiples



Icelandair	Western Europe	North America
EV/Revenue 0.31x	Harmonic average 0.37x	Harmonic average 0.84x

Source: Bloomberg, Own creation

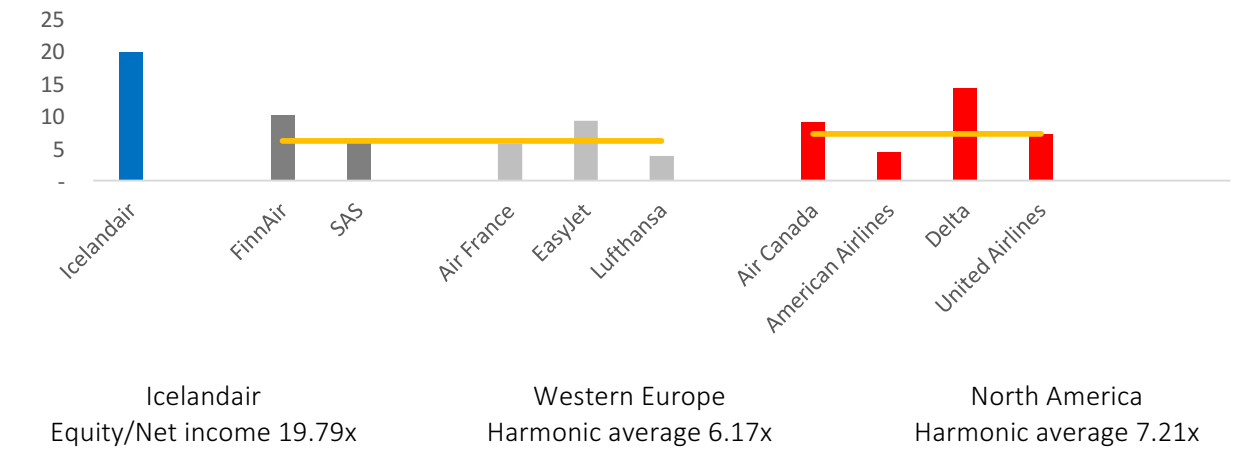
Since EV/Revenue does not indicate anything about a company's profitability, it is less relevant multiple than the two previously analyzed. However, we use the EV/Revenue multiple as a sanity check for the earnings-based multiples (Rosenbaum & Pearl, 2013). The results from the EV/Revenue multiple is very much in line with what we observe from the EV/EBITDA multiple. That indicates that the expenses as a percentage of revenue is similar among the companies. As was expected, the North American firms trade at a higher EV/Revenue multiple than the European based firms and the relative difference between the two is similar to the one we observe in the EV/EBITDA multiple.

Icelandair trades at a lower EV/Revenue multiple compared to the harmonic average of the European benchmark. Due to the difficulties previous years, Icelandair's enterprise value has decreased significantly, which might be affecting this relative valuation. Icelandair's EV/Revenue multiple is somewhat in between FinnAir and SAS trading multiple.

8.2.3 Equity/Net income

Figure 8.6

Equity/Net income multiples



Source: Bloomberg, Own creation

The equity-to-net income or price-earnings is an equity multiple and is the most widely recognized equity multiple used for relative valuation. It is particularly relevant for companies who are mature and are expected to grow its earnings consistently. Capital structure influences the equity-to-net income ratio, similar companies in size, and the operating margin can have different equity-to-net income ratios. More levered companies are entitled to higher financial expense which affects the net income and therefore, the equity-to-net income ratio. In addition to that, companies with higher multiple ratio compared to peers tend to have higher earnings growth expectation, (Rosenbaum & Pearl, 2013).

We still observe the same trends, that is the American peers trade on higher multiples compared to the European peer group. Icelandair trades on a significantly higher multiple than both peer group average. Icelandair is not more levered than the firms, but according to our forecast we estimate growth in net earnings which could explain the higher equity-to-net income ratio. The expected cumulative average growth rate (CAGR) in net earnings from year 2020 to 2024 is 21.33%. Hence, the high expected growth can explain the relatively high equity-to-net earnings ratio and does not necessarily mean that Icelandair is overvalued.

8.3 Valuation summary

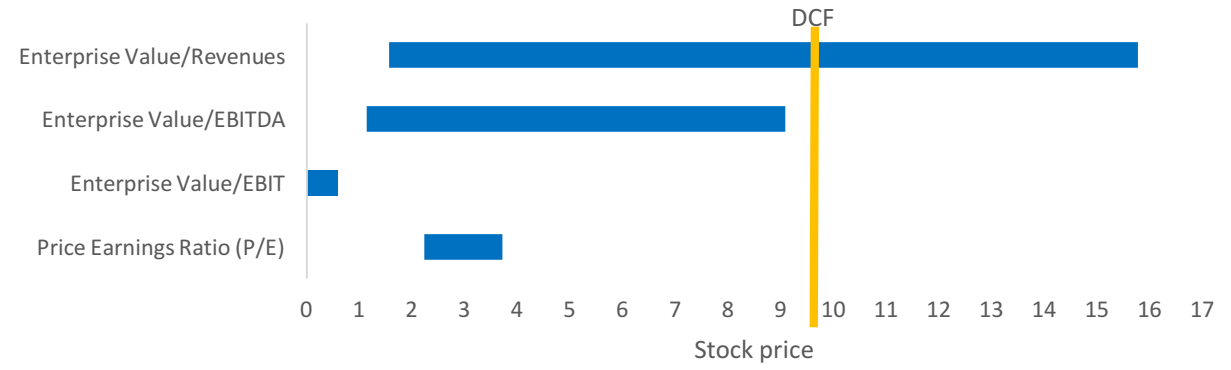
In this section, we have derived a discounted cash flow valuation of Icelandair as of September 1st 2019. Our valuation is based on the forecast derived from both strategic and financial analysis of Icelandair. The WACC is calculated and consists of the required return on equity and cost of debt. The required return on equity is derived through the CAPM where we use the MSCI World index as a proxy for the market portfolio and the yield on ten-year US treasury bonds as the proxy for the risk-free rate. Since Icelandair's stock price has fluctuated abnormally during the past year or so we use the industry's average adjusted beta. Icelandair has interest bearing debt in USD, EUR, and ISK. Cost of debt is estimated as the weighted average of the interest rate in each currency. The WACC changes slightly through the forecasted period as Icelandair capital structure changes but is approximately 6% during both the forecasted period and in the terminal period. From the DCF model, we derive an estimated stock price of 9.75 per share, which is a 33.5% premium on the current trading price of 7.30 per share. According to our estimation, Icelandair is significantly undervalued by the market. Majority of the enterprise value consists of the cash flow generated in the terminal period. A sensitivity analysis taking both growth and WACC in the terminal value into consideration shows how volatile the estimated stock price is to slight changes in the two.

A valuation based on forward-looking multiples is also conducted in this section. Icelandair's relative valuation based on the multiples is inconsistent, and we believe that the bad operating performance, especially in 2018 and 2019, skew the trading multiples. For benchmarking, we compared all ten peers but concluded that FinnAir and SAS share similar characteristics to Icelandair and are the most comparable peers.

Figure 8.6 shows the estimated stock price generated from the DCF. It also shows the interval between the relative valuation based on FinnAir multiples and SAS multiple, also known as the football field estimate. The figure shows an inconsistent valuation and a broad interval of the estimated stock price, although the valuation is based on the two most comparable firms. We conclude that the DCF valuation is the best estimate of the fair value of Icelandair's stock price as of September 1st 2019.

Figure 8.7

Valuation: "Football field"



Source: Bloomberg, Own creation

9. Conclusions

In the concluding discussion, we disclose our answer to the research question presented at the beginning of this project and provide a discussion on the valuation´s outcome. Throughout this project, we have analyzed both internal and external factors affecting Icelandair Group as well as historical financial data to estimate its equity value. Icelandair is a legacy airline that can trace its origin back to 1937. Currently, the company is at a standstill as all Boeing 737 MAX aircrafts are grounded and forbidden to operate.

Through both strategic and financial analysis, we created a forecast for the future outlook of Icelandair Group. The forecast presumes that the MAX airplanes will be allowed to fly in early 2020, which is in accordance with Icelandair's executive management expectations. From a DCF model, we derived a fair value of 9.75 ISK per share as of September 1st 2019. That is a 33.5% premium to the current market value of Icelandair´s equity. The estimated equity value is heavily dependent on the expected free cash flow in the terminal period. Both the estimated growth rate and the WACC in the terminal period have a significant impact on the estimated equity value. A result of a sensitivity analysis shows that with a 0.5% increase in WACC, the equity value decreases by approximately 18%.

To compare the results from the DCF model, we estimated both the enterprise and equity value of Icelandair through forward-looking of the industry benchmark. FinnAir and SAS were deemed to be the most comparable companies as they share both similar operating and financial characteristics with Icelandair. It proved challenging to find an estimate of Icelandair relative value with the multiple approach. Bad operating performance in 2018 and 2019 skew the results, and the interval between the benchmarking companies is relatively broad, making it difficult to conclude a reasonable valuation based on the multiples approach.

According to the literature, a DCF model is the most accurate way to estimate the fair value of a company. Based on our analysis, we agree with the literature and conclude that Icelandair´s fair value is best reflected based on a DCF model. However, we acknowledge that the model is highly volatile to small changes in the input factors. There is still a lot of uncertainty surrounding the Boing MAX aircrafts and the possible entrance of a new LCC to the market in light of WOW air recent bankruptcy. Those factors, among others, have a significant impact on Icelandair's future outlook. Based on those risk factors, investors might require increased expected return if to invest in Icelandair.

The DCF model in a way fails to capture and incorporate those additional risk factors as the required return on equity is solely based on the CAPM estimation. An increase in investors required rate of return would lower the equity value of Icelandair which could explain the discrepancy between the derived value and the current market value.

Throughout this project, the analyst perspective was employed, no contact was made with Icelandair, and this valuation is based on publicly available information only. For forecasting purposes, the operational performance of companies from both Western-Europe and North-America was analyzed. We observed a clear negative correlation in the jet fuel price and the profitability of the industry. It is also clear that the companies operating in North-America perform better and are more profitable than their European peers.

For further research, we suggest analyzing the profitability of airlines, based on their geographical positioning and the fleet they operate.

Bibliography

Air Iceland Connect | Icelandairgroup.is. (n.d.). Retrieved May 15, 2019, from https://www.icelandairgroup.is/companies/air-iceland-connect/

Airbus. (n.d.-a). A320neo. Retrieved August 7, 2019, from Airbus website: https://www.airbus.com/aircraft/passenger-aircraft/a320-family/a320neo.html

Airbus. (n.d.-b). A321neo. Retrieved August 7, 2019, from Airbus website: https://www.airbus.com/aircraft/passenger-aircraft/a320-family/a321neo.html

Airbus 2018 Price List Press Release. (n.d.). Retrieved July 17, 2019, from Airbus website: https://www.airbus.com/newsroom/press-releases/en/2018/01/airbus-2018-price-list-press-release.html

Airfleets. (n.d.). Fleet age Icelandair | Airfleets aviation. Retrieved May 23, 2019, from https://www.airfleets.net/ageflotte/Icelandair.htm

Anonymous. (2016, March 10). EU sanctions against Russia over Ukraine crisis [Text]. Retrieved May 29, 2019, from Newsroom—European Commission website: https://europa.eu/newsroom/highlights/special-coverage/eu-sanctions-against-russia-over-ukraine-crisis_en

Azadian, Farshid, and Bijan Vasigh. "*The Blurring Lines between Full-Service Network Carriers and Low-Cost Carriers: A Financial Perspective on Business Model Convergence."* Transport Policy 75 (March 2019): 19–26. https://doi.org/10.1016/j.tranpol.2018.12.012.

Ásgrímsson, Þ. (n.d.). Telur líklegt að Icelandair fái bætur. Retrieved July 9, 2019, from https://www.mbl.is/vidskipti/frettir/2019/05/06/telur_liklegt_ad_icelandair_fai_baetur/

BBC News. (n.d.). A quick guide to the US-China trade war—BBC News. Retrieved May 29, 2019, from https://www.bbc.com/news/business-45899310

Bjarnason, Þ. (n.d.). Lendingarleyfi WOW á Gatwick um 800 milljóna virði. Retrieved July 17, 2019, from https://www.mbl.is/vidskipti/frettir/2018/12/28/lendingarleyfi_wow_a_gatwick_um_800_milljona_virdi/

Boeing 737 Max: FAA says no fixed timetable for grounding to be lifted. (2019, May 23). Retrieved from https://www.bbc.com/news/business-48371100

Boston Consulting Group. (2006). *Understanding the demand for air travel: How to compete more effectively* (pp. 1–8). Retrieved from https://www.bcg.com/documents/file14820.pdf

Boyd, M. (n.d.). Only Two Global Airliner Manufacturers Left, And Lots Of Fallout Coming. Retrieved July 30, 2019, from Forbes website: https://www.forbes.com/sites/mikeboyd/2018/11/26/only-two-global-airliner-manufacturers-left-and-lots-of-fallout-coming/

Doganis, R. (2010). *Flying off course: Airline economics and marketing*. London: Routledge

Dixon, M. C. (2006). *The maintenance costs of aging aircraft: Insights from commercial aviation*. Santa Monica, CA: RAND.

DLR. (2008). *Analyses of the European air transport market, Airline Business Models*. Köln, Air Transport and Airport Research

Elliot, A. (n.d.). WAB air applies for Air Operator's Certificate | RÚV. Retrieved July 19, 2019, from https://www.ruv.is/frett/wab-air-applies-for-air-operators-certificate

Elliot, Alexander. (n.d.-a). WOW air 2.0? | RÚV. Retrieved July 19, 2019, from https://www.ruv.is/frett/wow-air-20

EU. (n.d.-b). Reducing emissions from aviation | Climate Action. Retrieved July 4, 2019, from https://ec.europa.eu/clima/policies/transport/aviation_en

Gillen, D., & Morrison, W. G. (2015). Aviation security: Costing, pricing, finance and performance. *Journal of Air Transport Management*, *48*, 1–12. https://doi.org/10.1016/j.jairtraman.2014.12.005

Glanz, J., Creswell, J., Kaplan, T., & Wichter, Z. (2019, March 10). After a Lion Air 737 Max Crashed in October, Questions About the Plane Arose. *The New York Times*. Retrieved from https://www.nytimes.com/2019/02/03/world/asia/lion-air-plane-crash-pilots.html

Halldórsson, Þ. (n.d.). Skúli: Breið□ þotur og lang□ flug reynst dýr□ keypt. Retrieved July 9, 2019, from https://www.frettabladid.is/markadurinn/skuli-breiotur-og-langflug-reynst-drkeypt/

Halldórsson, Þorsteinn. (n.d.-c). WAB air komið með skrifstofu og starfsfólk. Retrieved August 12, 2019, from https://www.frettabladid.is/markadurinn/wab-air-komid-med-skrifstofu-og-starfsfolk/

History.com. (n.d.-d). Labor Movement. Retrieved July 30, 2019, from HISTORY website: https://www.history.com/topics/19th-century/labor

IATA. (2018a). *Global Passenger Survey*. Retrieved from https://www.iata.org/publications/store/Documents/GPS-2018%20Highlights.pdf

IATA. (2018b, May). *Fact Sheet Climate Change*. Retrieved from https://www.iata.org/pressroom/facts_figures/fact_sheets/Documents/fact-sheet-climate-change.pdf

IATA. "*Profitability and the Air Transport Value Chain.",* June 2013.

IATA. (n.d.-a). Report on Brexit & Air Transport Issues. Retrieved May 28, 2019, from https://www.iata.org/policy/consumer-pax-rights/pages/brexit-study.aspx

IATA. (n.d.-b). *The Impact of September 11 2001 on Aviation*. Retrieved from https://www.iata.org/pressroom/Documents/impact-9-11-aviation.pdf

Icelandair. (2019). *Icelandair Group Q2 2019 Results*.

Icelandair. (n.d.). Icelandair | Icelandairgroup.is. Retrieved May 15, 2019, from Icelandair website: https://www.icelandairgroup.is/companies/icelandair/

Icelandair Group. (2019). *Annual report 2018*. Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item1227374/version2/ICE%2090747%20IS_arsskyrsla%202018%20FINAL.pdf

Icelandair Group. (2018). *Annual report 2017*. Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item1183376/version3/ICG%208669 3%20Arsskyrsla%20FINAL.pdf

Icelandair Group. (2017). *Annual report 2016*. Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item982449/version4/Annual%20Report%202016.pdf

Icelandair Group. (2016). *Annual report 2015*. Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item852398/version3/Annual%20Report%202015%20-%20Final.pdf

Icelandair Group. (2015). *Annual report 2014*. Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item786131/version1/Annual%20Report%202014%20Icelandair%20Group.pdf

Icelandair Group. (2018, November 2). Icelandair Hotels's sales process started. Retrieved May 15, 2019, from GlobeNewswire News Room website: http://www.globenewswire.com/news-release/2018/11/02/1641859/0/en/Icelandair-Hotels-s-sales-process-started.html

Icelandair Group. (n.d.-e). Tilkynning Icelandair vegna Boeing 737MAX | Icelandair. Retrieved May 15, 2019, from https://www.icelandair.com/is/

Icelandair Group Presentation of Q1 2018 Results. (n.d.). Retrieved from https://www.icelandairgroup.is/servlet/file/store653/item1186207/item.pdf

Icelandair Group Prospectus (pp. 1–366). (2019).

Icelandair Looks South and Buys 51% Of Cabo Verde Airlines. (2019, March 8). Retrieved August 28, 2019, from Simple Flying website: https://simpleflying.com/icelandair-cabo-verde-airlines-acquisition/

Ísleifsson, A. (n.d.). Verkfallið hafði áhrif á ferðir um 20 þúsund flugfarþega—Vísir. Retrieved July 30, 2019, from Visir.is website: https://www.visir.is/g/2017171218673

Jarvis, H. (2019, April 11). Icelandair cancels 100 flights. Retrieved July 9, 2019, from STANDBY Nordic website: https://standbynordic.com/icelandair-cancels-100-flights/

Johnson, G., Whittington, R., & Scholes, K. (2017). *Exploring strategy* (Eleventh Edition). New York: Pearson.

Klophaus, Richard, Roland Conrady, and Frank Fichert. *"Low Cost Carriers Going Hybrid: Evidence from Europe."* Journal of Air Transport Management 23 (August 2012): 54–58. https://doi.org/10.1016/j.jairtraman.2012.01.015.

Koller, Tim, Goedhart, Marc, & Wessels, David. (2010).*Valuation: Measuring and managing the value of companies* (5.th ed.). New York: John Wiley and Sons

Mazareanu, E. (n.d.). Low cost carriers' worldwide market share from 2007 to 2018. Retrieved July 20, 2019, from Statista website: https://www.statista.com/statistics/586677/global-low-cost-carrier-market-capacity-share/

Monetary Fund, I. (2019f). Inflation rate, average consumer prices. Retrieved August 18, 2019, from International Monetary Fund website: https://www.imf.org/external/datamapper/PCPIPCH@WEO

Olgeirsson, B. (n.d.). Verðhækkanir Icelandair í skugga brotthvarfs WOW eigi sér eðlilegar skýringar—Vísir. Retrieved August 6, 2019, from Visir.is website: https://www.visir.is/g/2019190328817

Porter, Michael E. (2008). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Simon and Schuster.

Porter, Micheael E. (1991). *How Competitive Forces Shape Strategy*. Harvard Business School press.

Petersen, C., Plenborg, T., & Kinserdal, F. (2017). *Financial Statement Analysis: Valuation - Credit Analysis - Performance Evaluation*. Bergen: Fagbokforlaget

Rosenbaum, J., & Pearl, J. (2013). *Investment Banking: Valuation, Leveraged Buyouts and Mergers & Acquisitions*. Wiley and Sons.

Samgöngustofa. (n.d.-g). Spurt og svarað um atvinnuflug. Retrieved July 17, 2019, from Samgöngustofa website: https://www.samgongustofa.is/flug/flugrekendur/atvinnuflug/spurt-og-svarad-um-atvinnuflug/

Sigurjónsson, K. (n.d.). Icelandair expanding into Asia. Retrieved August 10, 2019, from Túristi.is website: https://turisti.is/2018/05/icelandair-expanding-into-asia/

Single European Sky latest developments: Can digitalisation improve ATM in Europe? (2019, January 7). Retrieved May 28, 2019, from Airport Technology website: https://www.airport-technology.com/features/single-european-sky-latest-developments/

Smyril Line—Án farartækis. (n.d.). Retrieved July 30, 2019, from https://www.smyrilline.is/danmork/norraena-verd/an-farartaekis

Smyth, M., & Pearce, B. (n.d.). *IATA Economics Briefing No 9:* 46.

Statista. (n.d.). Low cost carrier market worldwide—Capacity share 2018. Retrieved July 20, 2019, from Statista website: https://www.statista.com/statistics/586677/global-low-cost-carrier-market-capacity-share/

Used Boeing Planes in High Demand as MAX Grounding Continues—Market Realist. (n.d.). Retrieved August 12, 2019, from https://marketrealist.com/2019/08/used-boeing-planes-demand-max-grounding/

Where do our raw materials come from? (2016, November 16). Retrieved May 29, 2019, from MINING.com website: http://www.mining.com/web/where-do-our-raw-materials-come-from/

Apendicies

Appendix 1 – Board of directors

Úlfar Steindórsson is the Chairman of the board. He has held board positions in many different companies in Iceland throughout his career. He was the CEO of Primex ehf., a Icelandic marine biotech company, from 2002-2004 and the CEO of the New Business Venture Fund from 1999-2002. Úlfar is currently the CEO and chairman of Toyota in Iceland. He holds a Candidatus Oeconomies degree from the University of Iceland and an MBA degree from the Virginia Commonwealth University. As of 6th of May 2019 Úlfar held 12.240.000 shares in Icelander Group. Úlfar has served on the board of directors since 15th of September 2010 (*Icelandair Group Prospectus*, 2019).

Ómar Benediktsson is the Deputy Chairman of the board. He is currently the CEO of Farice ehf., an Icelandic submarine network cable company, and board member at Landsnet hf. And Húsafell Resort ehf. He is highly experienced from within the tourist and aviation industry and has held several positions within the field over the past 30 years. He holds a Candidatus Oeconomies degree from the University of Iceland. As of 6th of May 2019 Ómar did not hold any shares in Icelandair. Ómar joined the Board of Directors on 3rd of March 2017 (*Icelandair Group Prospectus*, 2019).

Guðmundur Hafsteinsson is a board member at Icelandair Group. Currently he leads the product development for Google Assistant at Google. He founded the company EMU in 2012 and joined Google after the merger of the two companies in 2014. Before he founded EMU he was Vice Precident of Product at Siri, and stayed on after the company was acquired by Apple through the lunch of Siri on iPhone 4S. Prior to Siri, he worked at Google as a Senior Product Manager and managed the launches of Google Voice Search and Google Maps for mobile devices. Guðmundur holds a B.Sc. degree in Electrical and Computer Engineering from the University of Iceland and a MBA degree from Massachusetts Institute of Technology. As of 6th of May 2019 Guðmundur did not hold any shares in Icelandair Group. He joined the Board on 8th of March in 2018 (*Icelandair Group Prospectus*, 2019).

Heiðrún Jónsdóttir is a Board member at Icelandair Group. She is currently a Board member at the Icelandic bank Íslandsbanki and at Olíuverslun Íslands. She has served as the chairman of the board in several Icelandic organizations such as Gildi Pension Fund, Íslensk Verðbréf and Norðlenska

and served as a board member at Síminn hf. And Ístak. She handled public relations at Landssíminn hf. From 2001-2003 and a Partner and Managing Director at Lex Legal Services from 2003-2005. She was the Vice President of legal affairs and Public Relations at Eimskipafélag Íslands drom 2006-2012. She has a degree in law from the University of Iceland, she is a District court Attorney and completed an Advanced Management program from IESE Business School in Barcelona. As of 6th of May 2019 Heiðrún held 400.000 shares in Icelandair Group. Heiðrún joined the Board on 8th of March in 2018 (*Icelandair Group Prospectus*, 2019).

Svafa Grönfeldt is a Board member at Icelandair Group. She was one of the founders of the innovation accelerator DesignX at MIT and co-founded the MET fund which is a seed investment fund. She currently sits on the Boards of Össur hf., Origo hf. and is the Chairman of the Board at MIT Innovation Accelerator. Prior experience includes being a Chief Organizational Development Officer at Alvogen and President of Reykjavík Unicesity. Svafa holds a PhD in Industial Relations from London School of Economics. She joined the Board on 8th of March 2019 (*Icelandair Group Prospectus*, 2019).

Appendix 2 – Group companies

Air Iceland Connect

Air Iceland Connect (AIC), formerly Flugfélag Íslands, is an airline operating in the west Nordic countries. It offers domestic flights in Iceland and flights to both Greenland and the Faroe Islands. AIC operated three Bombardier Q200 and three Bombardier Q400 at year end 2018. Around 319.000 people flew with AIC in 2018, which was a decrease of around 9% from the year before. AIC has benefitted from the growth in tourism in Iceland over the last decade. AIC´s product development has increasingly been focused on foreign tourists e.g. by offering different types of day tours and multi-day tours ("Air Iceland Connect | Icelandairgroup.is," n.d.).

Icelandair Hotels

Icelandair Hotels is made up from a portfolio of six different brands, which are situated all around Iceland. The biggest brand is Icelandair Hotels, which is made up from eight different hotels. Another big brand is Hotel Edda, which is comprised of eight smaller hotels that only operate during the summer months. Other brands are Hilton – Reykjavík Nordica, Canopy, Reykjavík Marina Residence and Curio Collection. The hotel operation within Icelandair Group was put into a formal sales process in November 2018 (2018). The Group aims to divest non-core businesses and focus on the it´s key competencies which is the airline industry. The net profit after tax from the hotel operations in 2018 were 2.404.000 USD and its net assets were 72.925.000 USD. The Group is expected to finish the sales process of its hotel operations in 2019 (*Icelandair Annual Report 2018*, n.d.).

Icelandair Cargo

Icelandair Cargo (IC) is the handles the groups cargo business. IC´s focus is on freight in passenger aircraft holds, which increases Icelandair's overall aircraft utilization and profitability. In addition to utilizing its passenger aircrafts for cargo, it operates two 757-200 freighters. The market area in which IC operates is somewhat dependent on the route network of Icelandair and

AIC. IC partners with many overland haulage companies in both Europe and North-America, which enables it to extend its services to and from all major cities in these markets. It also partners with other air carriers to extend its services to more faraway markets such as Asia. IC is a low asset company which leases its aircrafts and buys abilities from other sources. Its freighters are registered to Icelandair´s Air Operators Certificate (AOC) and the crews are leased from Icelandair. All maintenance on aircrafts, cargo handling, warehousing and a part of the cargo sales are outsourced.

Iceland Travel

Iceland Travel is an Icelandic travel agency and tour operator. Iceland Travel is both the biggest and longest running tour operator in Iceland. It´s core market operation is in business-to-business (B2B) transactions, but the company has in recent years put more focus on direct-to-customers sales. Icelandair Group has started preparing the sales process of Iceland Travel, but it is unknown when the sale will be completed. The divestment is in line with the strategic shift to focus on the company´s core competencies.

Loftleiðir Icelandic

Loftleiðir Icelandic was lunched as a marketing tool for the Group´s international Aircraft, Crew, Maintenance and Insurance (ACMI) and charter market services. Loftleiðir Icelandic has constricted it´s focus on mostly aircraft and maintenance projects and consulting services. Loftleiðir Icelandic also offers full charter solutions and VIP charter solutions.

Icelandair Ground Services

Icelandair Ground Services (IGS) offers three different types of services in four locations around Iceland. Firstly, IGS offers aircraft handling services for commercial, private and military aircrafts. Secondly, they offer catering and sandwich services where they produce over 1,6 million meals every year. Thirdly, IGS offer cargo and mail services which can serve all types of aircrafts and organize normal- and cooling storage in a warehouse in Keflavík.

Fjárvakur – Icelandair Shared Services

Fjárvakur – Icelandair Shared Services handles accounting, reporting and salary calculations and procedures for companies within Icelandair Group. Further it offers financial services to medium sized and large companies. IGS has one subsidiary, Airline Services Estonia, which specializes in revenue accounting for airlines.

VITA

VITA offers leisure tours to Icelander that are travelling abroad utilizing its partnership with Icelandair. Vita offers a great variety of trips such as city breaks, sailing, sunny trips, golf trips and sport focused trips. Vita offers whole packages to its customers handling hotel reservations, car rentals and flight arrangements.

Appendix 3 - Analytical income statement

	2014	2015	2016	2017	2018
Operating Income					
Transport Revenue	811.002	848.868	947.823	1.050.101	1.093.314
Aircraft and aircrew lease	74.754	83.356	84.574	87.701	120.113
Other Operating revenue	227.541	207.475	253.177	280.185	297.091
Total Operating income	**1.113.297**	**1.139.699**	**1.285.574**	**1.417.987**	**1.510.518**
Operating Expenses					
Salaries and other personnel expenses	273.161	278.015	354.253	445.162	515.872
Aviation expenses	457.296	401.194	420.250	456.012	552.669
Other Operating Expenses	228.502	233.824	291.226	346.737	365.498
Total Operating expences	**958.959**	**913.033**	**1.065.729**	**1.247.911**	**1.434.039**
EBITDA	**154.338**	**226.666**	**219.845**	**170.076**	**76.479**
Depreciation & Amortisation	-75.329	-83.826	-101.408	-120.431	-133.447
EBIT	**79.009**	**142.840**	**118.437**	**49.645**	**-56.968**
Effective tax rate	-19,32%	-20,75%	-26,37%	-23,11%	-17,60%
Operating tax	-15.268	-29.638	-31.232	-11.473	10.024
NOPAT	**63.741**	**113.202**	**87.205**	**38.172**	**-46.944**
Financial income	7.194	5.134	6.414	14.083	8.578
Financial expences	-6.079	-8.210	-5.697	-15.678	-21.172
NFE	**1.115**	**-3.076**	**717**	**-1.595**	**-12.594**
Tax shield	-215	638	-189	369	2.216
Profit of associates	-216	459	957	592	1.752
Net earnings	**64.425**	**111.223**	**88.690**	**37.538**	**-55.570**

Appendix 4 – Analytical balance sheet

Assets	***2014***	***2015***	***2016***	***2017***	***2018***
Operating assets					
Operating Assets	319.340	419.071	602.615	652.705	673.420
Intangible assets and goodwill	175.973	172.694	174.704	180.422	177.568
Investments in associates	2.324	18.223	23.497	29.629	26.134
Deffered cost	153	118	63	0	91
Recivables and deposits	16.413	27.474	74.098	97.030	17.365
Inventories	22.906	19.205	23.963	26.801	25.951
Trade and other receivables	96.470	101.075	139.280	186.027	118.298
Assets held for sale	0	0	4.148	7.500	125.169
Total operating assets	**633.579**	**757.860**	**1.042.368**	**1.180.114**	**1.163.996**
Financial assets					
Derivatives used for hedging	0	0	0	18.450	666
Short term investments	30.879	19.533	23.236	4.087	0
Cash and cash equivalents	184.762	194.586	226.889	221.191	299.460
Total financial assets	**215.641**	**214.119**	**250.125**	**243.728**	**300.126**
Total assets	**849.220**	**971.979**	**1.292.493**	**1.423.842**	**1.464.122**
Operating Liabilities					
Payables	8.291	8.644	13.289	17.239	14.554
Deferred tax liabilities	24.681	35.485	58.179	60.885	32.868
Trade and other payables	214.315	219.680	210.543	232.188	222.766
Deferred income	174.944	186.109	199.887	226.061	214.850
Total operating liabilities	**422.231**	**449.918**	**481.898**	**536.373**	**485.038**
Financial liabilities					
Loans and borrowings	49.671	55.387	196.722	280.254	147.513
Loans and borrowings	12.263	10.143	45.660	9.287	268.288
Derivatives used for hedging	0	0	0	1.383	39.660
Liabilities held for sale	0	0	0	0	52.244
Total financial liabilities	**61.934**	**65.530**	**242.382**	**290.924**	**507.705**
Total liabilities	**484.165**	**515.448**	**724.280**	**827.297**	**992.743**
Equity					
Share Capital	40.576	40.576	40.576	39.532	39.053
Share Premium	154.705	154.705	154.705	140.519	133.513
Reserves	3.195	1.400	114.849	127.407	26.262
Retained earnings	166.371	259.746	257.696	287.749	271.034
Non-controlling interests	208	104	387	1.338	1.517
Total Equity	**365.055**	**456.531**	**568.213**	**596.545**	**471.379**
Total Liabilities and Equity	**849.220**	**971.979**	**1.292.493**	**1.423.842**	**1.464.122**

Appendix 5 – EBITDA margin

		2014	2015	2016	2017	2018	Average
Icelandair	EBITDA MARGIN	13,86%	19,89%	17,10%	11,99%	5,06%	13,58%
Air France	EBITDA MARGIN	9,93%	10,56%	11,19%	11,04%	15,86%	11,72%
EasyJet	EBITDA MARGIN	15,44%	17,63%	14,29%	11,87%	11,43%	14,13%
FinnAir	EBITDA MARGIN	2,77%	11,63%	8,08%	13,78%	17,70%	10,79%
Lufthansa	EBITDA MARGIN	8,41%	10,70%	12,74%	14,93%	13,82%	12,12%
Norwegian	EBITDA MARGIN	-3,39%	6,59%	12,01%	-1,93%	-5,42%	1,57%
SAS	EBITDA MARGIN	4,12%	9,22%	8,16%	8,95%	8,67%	7,82%
Europe Average	EBITDA MARGIN	6,21%	11,05%	11,08%	9,77%	10,34%	9,69%
Air Canada	EBITDA MARGIN	10,23%	15,63%	14,88%	14,49%	12,69%	13,58%
American Airlines	EBITDA MARGIN	13,51%	19,06%	17,68%	21,23%	15,09%	17,31%
Delta	EBITDA MARGIN	9,85%	23,68%	25,81%	23,06%	19,32%	20,35%
United Airlines	EBITDA MARGIN	10,42%	18,45%	17,27%	15,40%	16,54%	15,62%
America Average	EBITDA MARGIN	11,00%	19,20%	18,91%	18,55%	15,91%	16,71%
Industry average	EBITDA MARGIN	8,13%	14,31%	14,21%	13,28%	12,57%	12,50%

Appendix 6 – EBIT margin

		2014	2015	2016	2017	2018	Average
Icelandair	EBIT MARGIN	7,10%	12,53%	9,21%	3,50%	-3,77%	5,71%
Air France	EBIT MARGIN	3,01%	4,20%	4,49%	0,06%	4,98%	3,35%
EasyJet	EBIT MARGIN	12,83%	14,68%	10,67%	8,00%	7,80%	10,80%
FinnAir	EBIT MARGIN	-3,17%	5,24%	3,63%	8,75%	7,32%	4,35%
Lufthansa	EBIT MARGIN	3,38%	5,11%	6,99%	8,47%	7,75%	6,34%
Norwegian	EBIT MARGIN	-7,22%	1,55%	7,01%	-6,47%	-9,56%	-2,94%
SAS	EBIT MARGIN	0,32%	5,52%	4,70%	5,12%	4,73%	4,08%
Europe Average	EBIT MARGIN	1,53%	6,05%	6,25%	3,99%	3,84%	4,33%
Air Canada	EBIT MARGIN	6,14%	10,79%	9,16%	8,44%	6,50%	8,21%
American Airlines	EBIT MARGIN	9,96%	15,14%	13,15%	9,93%	5,96%	10,83%
Delta	EBIT MARGIN	5,47%	19,17%	17,73%	14,50%	11,85%	13,74%
United Airlines	EBIT MARGIN	6,10%	13,64%	11,87%	9,72%	7,97%	9,86%
America average	EBIT MARGIN	6,92%	14,68%	12,98%	10,65%	8,07%	10,66%
Industry average	EBIT MARGIN	3,68%	9,50%	8,94%	6,65%	5,53%	6,86%

Appendix 6 – ROIC

		2014	2015	2016	2017	2018	Average
Icelandair	ROIC	9,81%	14,08%	6,11%	1,75%	-1,66%	6,02%
Air France	ROIC	-53,47%	3,84%	4,46%	16,16%	6,49%	-4,50%
EasyJet	ROIC	17,03%	20,27%	14,38%	9,85%	10,30%	14,37%
Finnair	ROIC	-5,44%	10,53%	5,80%	10,66%	9,39%	6,19%
Lufthansa	ROIC	3,86%	13,67%	10,55%	13,27%	14,19%	11,11%
Norwegian	ROIC	-6,04%	3,72%	6,37%	-5,00%	-8,08%	-1,81%
SAS	ROIC	3,40%	8,55%	15,72%	8,57%	9,81%	9,21%
Europe average	ROIC	-6,78%	10,10%	9,55%	8,92%	7,02%	5,76%
Air Canada	ROIC	22,80%	28,70%	20,29%	24,70%	2,20%	19,74%
American Airlines	ROIC	16,14%	35,76%	16,62%	8,60%	8,54%	17,13%
Delta	ROIC	8,55%	27,47%	25,09%	16,83%	14,58%	18,50%
United Airlines	ROIC	13,54%	47,26%	13,71%	12,53%	9,97%	19,40%
America average	ROIC	15,26%	34,80%	18,93%	15,67%	8,82%	18,69%
Industry average	ROIC	2,04%	19,98%	13,30%	11,62%	7,74%	10,93%

Appendix 7 – Profit margin

		2014	2015	2016	2017	2018	Average
Icelandair	Profit Margin	5,97%	9,77%	6,91%	2,64%	-3,70%	4,32%
Air France	Profit Margin	-0,90%	0,46%	3,19%	0,63%	1,54%	0,98%
EasyJet	Profit Margin	9,94%	11,69%	9,15%	6,04%	6,07%	8,58%
FinnAir	Profit Margin	-3,62%	3,85%	3,67%	6,60%	5,32%	3,16%
Lufthansa	Profit Margin	0,18%	5,30%	5,61%	6,58%	6,03%	4,74%
Norwegian	Profit Margin	-5,47%	1,09%	4,37%	-5,80%	-3,63%	-1,89%
SAS	Profit Margin	-1,94%	2,41%	3,35%	2,69%	3,55%	2,01%
Europe average	Profit Margin	-0,30%	4,13%	4,89%	2,79%	3,15%	2,93%
Air Canada	Profit Margin	0,75%	2,18%	5,97%	12,48%	0,92%	4,46%
American Airlines	Profit Margin	6,76%	18,57%	6,66%	3,01%	3,17%	7,63%
Delta	Profit Margin	1,63%	11,12%	10,63%	7,79%	8,86%	8,01%
United Airlines	Profit Margin	2,91%	19,39%	6,19%	5,67%	5,15%	7,86%
America average	Profit Margin	3,01%	12,81%	7,36%	7,24%	4,53%	6,99%
Industry average	Profit Margin	1,02%	7,61%	5,88%	4,57%	3,70%	4,56%

Appendix 8 – Passenger revenues

Value drivers	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
ASK growth		14%	23%	12%	6%	5%	10,0%	5%	5%	5%	2%
Inflation						2,80%	2,50%	2,50%	2,50%	2,50%	2,50%
Expected growth						3,00%	3,00%	0,00%	-1,50%	-0,50%	-0,50%
Load factor	80,29%	83,00%	82,00%	82,43%	80,80%	82,00%	84,00%	84,00%	85,00%	85,00%	85,00%
ASK	9.820.861	11.226.933	13.832.932	15.459.164	16.420.459	17.241.482	18.965.630	19.913.912	20.909.607	21.955.088	22.394.189
RPK	7.885.006	9.318.431	11.343.164	12.743.154	13.267.607	14.138.015	15.931.129	16.727.686	17.773.166	18.661.824	19.035.061
Average price per passenger kilometer				0,074	0,071	0,076	0,080	0,082	0,083	0,084	0,086
Passenger revenue				**941.611,00**	**947.494,00**	**1.068.213,28**	**1.269.897,16**	**1.366.726,82**	**1.466.668,72**	**1.570.802,20**	**1.634.262,60**

Appendix 9 – Cargo and mail revenues

Value driver	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Freight ton KM growth	-	2,52%	6,83%	9,22%	7,44%	5,00%	5,00%	5,00%	5,00%	5,00%	5,00%
Freight ton KM	97.854.000	100.321.000	107.171.000	117.055.000	125.759.000	132.046.950	138.649.298	145.581.762	152.860.850	160.503.893	168.529.088
Revenue pr. FTtonne KM	0,00045	0,00042	0,00049	0,00048	0,00046	0,00046	0,00046	0,00046	0,00046	0,00046	0,00046
Revenue Cargo and mail	**44.378**	**42.313**	**52.209**	**56.345**	**58.358**	**60.949**	**63.996**	**67.196**	**70.556**	**74.084**	**77.788**

Appendix 10 - Passenger Ancillary revenues

Value driver	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Passenger Ancillary revenue as % or rev				5,5%	9,2%	9,0%	9,0%	9,0%	9,0%	9,0%	9,0%
Revenue from international flight operations				941.611	947.494	1.068.213	1.269.897	1.366.727	1.466.669	1.570.802	1.634.263
Passenger Ancillary revenue				**52.145**	**87.462**	**96.139**	**114.291**	**123.005**	**132.000**	**141.372**	**147.084**

Appendix 11 – Aircraft and aircrew lease revenues

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Aircraft and aircrew lease revenue	**74.754**	**83.356**	**84.574**	**87.701**	**120.113**	**92.141**	**94.444**	**96.805**	**99.226**	**101.706**	**104.249**
Charter Fleet Size	7	9	7	8	10	8	8	8	8	8	8

Appendix 12 – Other operating revenues

Value drivers	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Hotel Operation growth							2,5%	2,5%	2,5%		
Iceland Travel growth							5%	5%	5%	5%	2,5%
Other non- disclosed revenue							2,5%	2,5%	2,5%	2,5%	2,5%
Hotel Operation	77.295	65.948	93.142	87.389	104.590	92.462	23.693	24.286	24.893	0	0
Iceland Travel	87.085	91.555	109.980	140.193	133.543	120.271	126.285	132.599	139.229	146.190	149.845
Other non- disclosed revenue	63.161	49.972	50.055	52.603	58.958	54.010	55.360	56.744	58.163	59.617	61.107
Sale gain						62.850			20.950		
Other operating revenue total	**227.541**	**207.475**	**253.177**	**280.185**	**297.091**	**329.593**	**205.338**	**213.629**	**243.234**	**205.807**	**210.952**

Appendix 13 – Total operating revenues

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Revenue from international flight operations	766.624	806.555	895.614	941.611	947.494	1.068.213	1.269.897	1.366.727	1.466.669	1.570.802	1.634.263
Passenger Ancillary revenue	0	0	0	52.145	87.462	96.139	114.291	123.005	132.000	141.372	147.084
Revenue Cargo and mail	44.378	42.313	52.209	56.345	58.358	60.949	63.996	67.196	70.556	74.084	77.788
Aircraft and aircrew lease revenue	74.754	83.356	84.574	87.701	120.113	92.141	94.444	96.805	99.226	101.706	104.249
Other operating revenue total	227.541	207.475	253.177	280.185	297.091	329.593	205.338	213.629	243.234	205.807	210.952
Total operating revenue	**1.113.297**	**1.139.699**	**1.285.574**	**1.417.987**	**1.510.518**	**1.647.035**	**1.747.967**	**1.867.363**	**2.011.685**	**2.093.771**	**2.174.335**

Appendix 14 – Salaries and other personnel related cost

Value drivers	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
ASK	9.820.861	11.226.933	13.832.932	15.459.164	16.420.459	17.241.482	18.965.630	19.913.912	20.909.607	21.955.088	22.394.189
ASK per FTE (IA&IGS)	4.738	4.992	5.282	5.291	5.037	5.068	5.068	5.068	5.068	5.068	5.068
Number of FTE (IA&IGS)	2.073	2.249	2.619	2.922	3.260	3.402	3.742	3.930	4.126	4.332	4.419
Other group units FTE	1.036	1.135	1.281	1.341	1.346	1.346	843	845	847	681	683
Total number of FTE	3.109	3.384	3.900	4.263	4.606	4.748	4.586	4.775	4.973	5.013	5.102
Average yearly salaries per FTE	88	82	91	104	112	115	118	122	127	132	138
Yearly salary growth		-6%	11%	15%	7%	2,5%	2,5%	4,0%	4,0%	4,0%	4,0%
Salaries and other personnel expenses	**273.161**	**278.015**	**354.253**	**445.162**	**515.872**	**545.092**	**539.594**	**584.322**	**632.956**	**663.575**	**702.321**

Appendix 15 – Number of employees

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Icelandair	1.529	1.678	1.924	2.143	3.260	3.402	3.742	3.930	4.126	4.332	4.419
IGS	544	571	695	779							
Total Icelandair and IGS	**2.073**	**2.249**	**2.619**	**2.922**	**3.260**	**3.402**	**3.742**	**3.930**	**4.126**	**4.332**	**4.419**
Icelandair Cargo	49	51	58	56	80	80	82	84	86	88	90
Loftleiðir	11	11	10	10	11	11	11	11	11	11	11
Air Iceland Connect	221	215	224	232	233	233	233	233	233	233	233
Icelandair Hotels	495	568	646	677	673	673	168	168	168	0	0
Iceland Travel	115	135	176	197	168	168	168	168	168	168	168
VITA	18	21	23	25	30	30	30	30	30	30	30
Fjárvakur	115	120	128	127	137	137	137	137	137	137	137
Parent Company	12	14	16	17	14	14	14	14	14	14	14
Total employees	**3.109**	**3.384**	**3.900**	**4.263**	**4.606**	**4.748**	**4.586**	**4.775**	**4.973**	**5.013**	**5.102**

Appendix 16 – Aviation expenses

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
ASK	9.820.861	11.226.933	13.832.932	15.459.164	16.420.459	17.241.482	18.965.630	19.913.912	20.909.607	21.955.088	22.394.189
Aircraft fuel	271.871	223.828	213.418	235.358	298.771	332.649	329.322	336.183	352.992	370.642	378.055
Aircraft lease	26.653	22.896	20.687	21.757	36.532	68.145	26.236	27.548	28.925	30.371	30.979
Aircraft handling, landing and communication	82.888	85.662	108.784	122.757	136.443	138.567	152.424	160.045	168.047	176.450	179.979
Aircraft maintenance expenses	75.884	68.808	77.361	76.140	80.923	84.969	93.466	98.139	103.046	108.199	110.363
Total aviation expenses	**457.296**	**401.194**	**420.250**	**456.012**	**552.669**	**624.330**	**601.448**	**621.915**	**653.011**	**685.661**	**699.374**
Value drivers											
AKS/Fuel	0,02768	0,01994	0,01543	0,01522	0,01820	0,01929	0,01736	0,01688	0,01688	0,01688	0,01688
AKS/Lease	0,00271	0,00204	0,00150	0,00141	0,00222	0,00395	0,00138	0,00138	0,00138	0,00138	0,00138
ASK/ Handling, landin and communication	0,00844	0,00763	0,00786	0,00794	0,00831	0,00804	0,00804	0,00804	0,00804	0,00804	0,00804
ASK/Aircraft maintenance expenses	0,00773	0,00613	0,00559	0,00493	0,00493	0,00493	0,00493	0,00493	0,00493	0,00493	0,00493

Appendix 17 – Other operating expenses

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Total Operating income	1.113.297	1.139.699	1.285.574	1.417.987	1.510.518	1.647.035	1.747.967	1.867.363	2.011.685	2.093.771	2.174.335
Other operating expeses as % of Income	20,52%	20,52%	22,65%	24,45%	24,20%	25,0%	24,0%	24,0%	24,0%	24,0%	24,0%
Other operating expeses	**228.502**	**233.824**	**291.226**	**346.737**	**365.498**	**411.759**	**419.512**	**448.167**	**482.804**	**502.505**	**521.840**

Appendix 18 – Total operating expenses

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Salaries and other personnel expenses	273.161	278.015	354.253	445.162	515.872	545.092	539.594	584.322	632.956	663.575	702.321
Total aviation expenses	457.296	401.194	420.250	456.012	552.669	624.330	601.448	621.915	653.011	685.661	699.374
Other operating expeses	228.502	233.824	291.226	346.737	365.498	411.759	419.512	448.167	482.804	502.505	521.840
Total operating expenses	**958.959**	**913.033**	**1.065.729**	**1.247.911**	**1.434.039**	**1.581.181**	**1.560.554**	**1.654.404**	**1.768.771**	**1.851.741**	**1.923.536**

Appendix 19 – Depreciation and amortization

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Operating Assests	319.340	419.071	602.615	652.705	673.420	754.823	801.079	855.797	921.939	959.559	996.481
Intangible assets	175.973	172.694	174.704	180.422	177.568	209.002	216.566	229.279	250.505	259.072	268.923
Depreciation as % of Operating Assets	22,43%	19,12%	16,46%	18,09%	19,27%	19,08%	19,08%	19,08%	19,08%	19,08%	19,08%
Depreciation as % of Intangible Assets	2,10%	2,13%	1,28%	1,31%	2,06%	1,78%	1,78%	1,78%	1,78%	1,78%	1,78%
Depreciation Operating Assets	71.632	80.146	99.179	118.059	129.792	143.983	152.806	163.244	175.860	183.036	190.079
Depreciation Intagible assets	3.697	3.680	2.229	2.372	3.655	3.712	3.847	4.072	4.449	4.602	4.776
Total Depreciation and Amortization	**75.329**	**83.826**	**101.408**	**120.431**	**133.447**	**147.695**	**156.653**	**167.316**	**180.310**	**187.638**	**194.856**

Appendix 20 – Analytical income statement Forecasted

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Revenue from international flight operations	766.624	806.555	895.614	941.611	947.494	1.068.213	1.269.897	1.366.727	1.466.669	1.570.802	1.634.263
Passenger Ancillary revenue	0	0	0	52.145	87.462	96.139	114.291	123.005	132.000	141.372	147.084
Revenue Cargo and mail	44.378	42.313	52.209	56.345	58.358	60.949	63.996	67.196	70.556	74.084	77.788
Aircraft and aircrew lease revenue	74.754	83.356	84.574	87.701	120.113	92.141	94.444	96.805	99.226	101.706	104.249
Other operating revenue total	227.541	207.475	253.177	280.185	297.091	329.593	205.338	213.629	243.234	205.807	210.952
Total operating revenue	**1.113.297**	**1.139.699**	**1.285.574**	**1.417.987**	**1.510.518**	**1.647.035**	**1.747.967**	**1.867.363**	**2.011.685**	**2.093.771**	**2.174.335**
Salaries and other personnel expenses	273.161	278.015	354.253	445.162	515.872	545.092	539.594	584.322	632.956	663.575	702.321
Total aviation expenses	457.296	401.194	420.250	456.012	552.669	624.330	601.448	621.915	653.011	685.661	699.374
Other operating expeses	228.502	233.824	291.226	346.737	365.498	411.759	419.512	448.167	482.804	502.505	521.840
Total operating expenses	**958.959**	**913.033**	**1.065.729**	**1.247.911**	**1.434.039**	**1.581.181**	**1.560.554**	**1.654.404**	**1.768.771**	**1.851.741**	**1.923.536**
EBITDA	**154.338**	**226.666**	**219.845**	**170.076**	**76.479**	**65.854**	**187.412**	**212.958**	**242.914**	**242.030**	**250.800**
Total Depreciation and Amortization	75.329	83.826	101.408	120.431	133.447	147.695	156.653	167.316	180.310	187.638	194.856
EBIT	**79.009**	**142.840**	**118.437**	**49.645**	**-56.968**	**-81.841**	**30.760**	**45.642**	**62.604**	**54.392**	**55.944**
Tax	19,32%	20,75%	26,37%	23,11%	17,60%	20,00%	20,00%	20,00%	20,00%	20,00%	20,00%
NOPAT	**63.741**	**113.202**	**87.205**	**38.172**	**-46.944**	**-81.841**	**24.608**	**36.514**	**50.084**	**43.514**	**44.755**
NFE	1.115	-3.076	717	-1.595	-12.594	-7.893	-8.377	-8.949	-9.641	-10.034	-10.421
Tax shield	215	-638	189	-369	-2.216	1.579	1.675	1.790	1.928	2.007	2.084
Profit of associates	-216	459	957	592	1.752	1.116	1.147	1.285	1.455	1.601	1.781
Net earnings	**64.425**	**111.223**	**88.690**	**37.538**	**-55.570**	**-87.039**	**19.053**	**30.639**	**43.826**	**37.087**	**38.200**

Appendix 21 – Intangible and tangible assets

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Operating Assets	319.340	419.071	602.615	652.705	673.420	754.823	801.079	855.797	921.939	959.559	996.481
Intangible assets and goodwill	175.973	172.694	174.704	180.422	177.568	209.002	216.566	229.279	250.505	259.072	268.923
Investments in associates	2.324	18.223	23.497	29.629	26.134	31.005	32.905	35.152	37.869	39.414	40.931
Deffered cost	153	118	63	0	91	60	64	68	73	76	79
Recivables and deposits	16.413	27.474	74.098	97.030	17.365	75.523	80.151	85.626	92.244	96.008	99.702
Total	**514.203**	**637.580**	**874.977**	**959.786**	**894.578**	**1.070.413**	**1.130.766**	**1.205.923**	**1.302.630**	**1.354.129**	**1.406.116**
Value drivers/Asset as % of revenues											
Total operating revenue	1.113.297	1.139.699	1.285.574	1.417.987	1.510.518	1.647.035	1.747.967	1.867.363	2.011.685	2.093.771	2.174.335
Operating Assets	28,7%	36,8%	46,9%	46,0%	44,6%	45,8%	45,8%	45,8%	45,8%	45,8%	45,8%
Intangible assets and goodwill	15,8%	15,2%	13,6%	12,7%	11,8%	12,7%	12,4%	12,3%	12,5%	12,4%	12,4%
Investments in associates	0,2%	1,6%	1,8%	2,1%	1,7%	1,9%	1,9%	1,9%	1,9%	1,9%	1,9%
Deffered cost	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Recivables and deposits	1,5%	2,4%	5,8%	6,8%	1,1%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%
IT&TAssets/revenue	**44,49%**	**51,92%**	**60,46%**	**58,75%**	**56,34%**	**58,52%**	**58,22%**	**58,11%**	**58,28%**	**58,20%**	**58,20%**

Appendix 22 – Invested capital and Net interest bearing debt

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Total revenues	1.113.297	1.139.699	1.285.574	1.417.987	1.510.518	1.647.035	1.747.967	1.867.363	2.011.685	2.093.771	2.174.335
IC as a % if revenues	18,98%	27,02%	43,60%	45,40%	44,95%	45,00%	45,00%	45,00%	45,00%	45,00%	45,00%
Invested Capital	**211.348**	**307.942**	**560.470**	**643.741**	**678.958**	**741.166**	**786.585**	**840.313**	**905.258**	**942.197**	**978.451**
NIBD as a % if IC	-72,73%	-48,25%	-1,38%	7,33%	30,57%	30%	30%	30%	30%	30%	30%
NIBD	**-153.707**	**-148.589**	**-7.743**	**47.196**	**207.579**	**222.350**	**235.976**	**252.094**	**271.577**	**282.659**	**293.535**

Appendix 22 – Net working capital and Capital expenditure

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
Total operating revenue	1.113.297	1.139.699	1.285.574	1.417.987	1.510.518	1.647.035	1.747.967	1.867.363	2.011.685	2.093.771	2.174.335
NWC as % of Total revenues	-8,79%	-7,07%	-2,70%	-4,69%	-5,77%	-6,00%	-6,00%	-6,00%	-6,00%	-6,00%	-6,00%
CAPEX as % of Total revenues	-12%	-19%	-23%	-16%	-9%	-9%	-9%	-9%	-9%	-9%	-9%
NWC	**-97.881**	**-80.569**	**-34.736**	**-66.505**	**-87.224**	**-98.822**	**-104.878**	**-112.042**	**-120.701**	**-125.626**	**-130.460**
CAPEX	**-130.156**	**-219.942**	**-291.759**	**-228.419**	**-129.933**	**-148.233**	**-157.317**	**-168.063**	**-181.052**	**-188.439**	**-195.690**

Appendix 23 – Balance sheet items – Forecast

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
IT&Tassets	495.313	591.765	777.319	833.127	850.988	963.825	1.017.646	1.085.076	1.172.444	1.218.630	1.265.403
NWC	-97.881	-80.569	-34.736	-66.505	-87.224	-98.822	-104.878	-112.042	-120.701	-125.626	-130.460
CAPEX	-130.156	-219.942	-291.759	-228.419	-129.933	-148.233	-157.317	-168.063	-181.052	-188.439	-195.690
Equity beginning		365.055	456.531	568.213	596.545	502.529	520.759	549.301	589.962	619.845	650.126
Net earnings	64.425	111.223	88.690	37.538	-55.570	-87.039	19.053	30.639	43.826	37.087	38.200
Dividend	19.000	17.900	27.000	5.000	7.300	0	3.811	6.128	8.765	7.417	7.640
Equity end	365.055	456.531	568.213	596.545	502.529	520.759	549.301	589.962	619.845	650.126	681.013
IC	211.348	307.942	560.470	643.741	678.958	741.166	786.585	840.313	905.258	942.197	978.451
NIBD	-153.707	-148.589	-7.743	47.196	207.579	222.350	235.976	252.094	271.577	282.659	293.535
D/E	-42,11%	-32,55%	-1,36%	7,91%	41,31%	42,70%	42,96%	42,73%	43,81%	43,48%	43,10%
D/EV	-72,73%	-48,25%	-1,38%	7,33%	29,23%	29,92%	30,05%	29,94%	30,47%	30,30%	30,12%
E/EV	172,73%	148,25%	101,38%	92,67%	70,77%	70,08%	69,95%	70,06%	69,53%	69,70%	69,88%

Appendix 24 – Free cash flow

	2014	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*	*2023*	*2024*
NOPAT	63.741	113.202	87.205	38.172	-46.944	-81.841	24.608	36.514	50.084	43.514	44.755
D&A	75.329	83.826	101.408	120.431	133.447	147.695	156.653	167.316	180.310	187.638	194.856
Change in NWC		17.312	45.833	-31.769	-20.719	-11.598	-6.056	-7.164	-8.659	-4.925	-4.834
CAPEX	-130.156	-219.942	-291.759	-228.419	-129.933	-148.233	-157.317	-168.063	-181.052	-188.439	-195.690
FCFF		-5.602	-57.313	-101.585	-64.149	-93.977	17.888	28.604	40.682	37.787	39.087
Change in NIBD		5.118	140.846	54.939	160.383	14.771	13.626	16.118	19.484	11.082	10.876
NFE after tax		1.330	-3.714	906	-1.964	-14.810	-9.472	-10.053	-10.739	-11.569	-12.041
FCFE		846	79.819	-45.740	94.270	-94.016	22.041	34.669	49.427	37.299	37.922
Dividend	19.000	17.900	27.000	5.000	7.300	0	3.811	6.128	8.765	7.417	7.640
Cash surplus		-17.054	52.819	-50.740	86.970	-94.016	18.231	28.542	40.661	29.882	30.282

Appendix 25 – Weighted average cost of capital

Return on Equity	*7,41%*
Return on Debt	3,55%
Tax rate	20,00%

	2019	2020	2021	2022	2023	2024
Equity/EV	70,1%	70,0%	70,1%	69,5%	69,7%	69,9%
Debt/EV	29,9%	30,0%	29,9%	30,5%	30,3%	30,1%
WACC	6,04%	6,04%	6,04%	6,02%	6,03%	6,03%

Appendix 26 – Discounted cash flow to the firm

	2019	2020	2021	2022	2023	2024
NOPAT	- 81.841	24.608	36.514	50.084	43.514	44.755
D&A	147.695	156.653	167.316	180.310	187.638	194.856
Change in NWC	- 11.598	- 6.056	- 7.164	- 8.659	- 4.925	- 4.834
CAPEX	- 148.233	- 157.317	- 168.063	- 181.052	- 188.439	- 195.690
FCFF	- 93.977	17.888	28.604	40.682	37.787	39.087
Equity/EV	70%	70%	70%	70%	70%	70%
Debt/EV	30%	30%	30%	30%	30%	30%
WACC	6,04%	6,04%	6,04%	6,02%	6,03%	6,03%
Growth in terminal value						1,50%
Discount factor	0,98	0,92	0,87	0,82	0,78	0,73
PV of FCFF	**- 92.157**	**16.543**	**24.944**	**33.482**	**29.325**	**28.598**

PV forecasted period	**12.137**
PV Terminal period	**630.810**
EV	**642.948**
NIBD	**222.350**
Market value of Equity	**420.598**
Shares outstanding	**5.437.661**
Price per share	**0,0773**
ISK/USD	**126,04**
Price per share (ISK)	**9,75**

Appendix 27 – Multiples

Current	*Icelandair*	*FinnAir*	*SAS*	*Air France*	*EasyJet*	*Lufthansa*	*Norwegian*	*Air Canada*	*American Airlines*	*Delta*	*United Airlines*
Enterprise Value	537	1.661	7.968	11.042	3.777	12.621	63.620	15.055	40.735	51.905	36.309
Current Market Cap	315	790	4.706	4.456	3.630	6.209	4.637	11.525	11.394	37.543	21.570

Full-Year 2020 Estimate	*Icelandair*	*FinnAir*	*SAS*	*Air France*	*EasyJet*	*Lufthansa*	*Norwegian*	*Air Canada*	*American Airlines*	*Delta*	*United Airlines*
Revenue	1.748	3.214	48.017	28.215	6.757	37.559	47.405	20.619	48.414	48.903	45.703
EBITDA	187	506	5.502	4.355	920	5.094	9.015	4.112	6.168	9.376	6.920
EBIT	31	206	2.383	1.366	515	2.490	2.811	2.006	3.945	6.516	4.490
Net Income	16	78	779	782	391	1.623	-65	1.294	2.633	2.633	3.055

Multiples	*Icelandair*	*FinnAir*	*SAS*	*Air France*	*EasyJet*	*Lufthansa*	*Norwegian*	*Air Canada*	*American Airlines*	*Delta*	*United Airlines*
Enterprise Value/Revenues	0,3074	0,52	0,17	0,39	0,56	0,34	1,34	0,73	0,84	1,06	0,79
Enterprise Value/EBITDA	2,8669	3,28	1,45	2,54	4,11	2,48	7,06	3,66	6,60	5,54	5,25
Enterprise Value/EBIT	17,4674	8,05	3,34	8,08	7,33	5,07	22,63	7,50	10,33	7,97	8,09
Price Earnings Ratio (P/E)	19,79	10,09	6,04	5,70	9,28	3,83	-	8,91	4,33	14,26	7,06

Numbers are in millions and in local reported currencies

Appendix 28 – Multiples calculations

Enterprise value-based multiples

Assuming constant growth rate the DCF is expressed as:

$$Enterprise\ value = \frac{FCFF}{WACC - g}$$

Replacing FCFF with NOPAT *(-reinvestment rate) the following is obtained:

$$Enterprise\ value = \frac{NOPAT * (1 - reinvestment\ rate)}{WACC - g}$$

Where reinvestment rate is the share of NOPAT that is reinvested and is equal to:

$$\frac{Change\ in\ NWC + Change\ in\ non\ current\ assets}{NOPAT}$$

Substituting NOPAT with ROIC * Invested Capital and dividing the equation with Invested Capital results in an EV/IC multiple

$$\frac{EV}{IC} = \frac{ROIC * (1 - reinvestment\ rate)}{WACC - g} \rightarrow \frac{EV}{IC} = \frac{ROIC - g}{WACC - g}$$

Multiplying the denominator with ROIC the EV/NOPAT multiple is obtained

$$\frac{EV}{NOPAT} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC}$$

To obtain the EV/EBIT multiple NOPAT is substituted with EBIT*(1-TAX)

$$\frac{EV}{EBIT} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX)$$

To obtain the EV/EBITDA multiple EBIT is substituted with EBITDA*(1-Depreciation rate)

$$\frac{EV}{EBITDA} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX) * (1 - Depreciation\ rate)$$

To obtain the EV/Revenue multiple EBITDA is substituted with Revenue*EBITDA margin

$$\frac{EV}{Revenue} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX) * (1 - D\&A\ \ rate) * EBITDA\ margin$$

The enterprise value multiples are therefore calculated as

$$\frac{\mathbf{EV}}{\mathbf{Revenue}} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX) * (1 - D\&A\ \ rate) * EBITDA\ margin$$

$$\frac{\mathbf{EV}}{\mathbf{EBITDA}} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX) * (1 - Depreciation\ rate)$$

$$\frac{\mathbf{EV}}{\mathbf{EBIT}} = \frac{ROIC - g}{WACC - g} * \frac{1}{ROIC} * (1 - TAX)$$

Equity based multiples

Assuming a constant growth rate, a DCF model can be expressed as:

$$Market\ value\ of\ Equity = \frac{Dividend}{r_e - g}$$

Replacing dividends with net earnings * payout ratio

$$Market\ value\ of\ Equity = \frac{Net\ earnings * Payout\ ratio}{r_e - g}$$

And substituting net earnings with ROE*Book value of equity

$$Market\ value\ of\ Equity = \frac{ROE * BVE * Payout\ ratio}{r_e - g}$$

Replacing the payout ratio wuth (1-retention rate) and dividing with BE we get the M/B multiple

$$\frac{MVE}{BVE} = \frac{ROE * (1 - RR)}{r_e - g} \rightarrow \frac{MVE}{BVE} = \frac{ROE - g}{r_e - g}$$

By multiplying the denominator in $\frac{MVE}{BVE}$ with ROE, the P/E (Net income/Equity) is obtained

$$\boldsymbol{\frac{P}{E}} = \frac{ROE - g}{r_e - g} * \frac{1}{ROE}$$

Source: Petersen, Plenborg & Kinserdal (2017)